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Edited by
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Contents

Thai

Chinese

Japanese and Korean

Europe: Finnish

Comparisons and contrasts

Introduction – Rice taboos, broad faces and complex categories

Eugene H. Casad and Gary B. Palmer

This volume has developed from a theme session on Cognitive Linguistics and Non-Indo-European languages held at the International Cognitive Linguistics Association Conference in Stockholm, Sweden, July 10–16, 1999. The proponents of a linguistic theory that lays claim to applying universally must demonstrate its application to the study of all spoken languages and not just the standard Western European and other well-known Indo-European languages. Furthermore, it should not confine itself to simply reformulating analyses of syntactic, morphological and semantic phenomena that are particularly characteristic of Western languages.

To be sure, the approach of Cognitive Linguistics has already proven its value in analyzing grammars from a variety of language families, in particular, as seen through Casad's and Tuggy's studies of two Southern Uto-Aztecan languages and the work of several of their colleagues, as well as those carried out in *Snchitsu'umtsn* Coeur d'Alene Salish and Shona (Bantu) languages by Palmer and his associates (Casad 1982, 1988, 1991, 1993, 1997, 1999; Tuggy, 1981, 1986, 1988, 1991; Palmer 1996). Similar work has also been conducted in these and other language families such as Altaic (Kumashiro 1999; Lee 1998; Minegishi Cook 1993), Mixtecan (Brugman 1983), Totonac-Tepehua (Watters 1996), Semitic (Rubba 1993), Sino-Tibetan (Newman 1993; Yu 1995, 1998, 2000a, 2000b) and Quechuan (Floyd 1993, 1996).

These studies have explored a number of grammatical phenomena that previous studies of these languages have ignored. Polysemy, the idea that both lexical items and individual morphemes convey a multiplicity of meanings, is substantiated again and again by these studies. In addition, the various meanings of a morpheme or lexical item are usually related to one another in motivated, but often unpredictable ways. The organization of such meanings into complex categories, related to one or more prototypes, with the particulars related to these prototypes at varying conceptual distances is illustrated in numerous analyses. Grammatical structures are shown to be symbolic composites of phonological units

with units of meaning. Such constructions are typically multi-level, in that they are built up by successively combining smaller symbols into larger ones.

At the level of the clause, cognitive linguistics posits that nominals are assigned varying degrees of prominence, either by their position in the clause or by some kind of conventional marking such as Hawaiian ***'o*** (Cook, this volume). Some nouns are foregrounded; others are backgrounded. Several papers in this volume appeal to this aspect of attentional process (i. e. Cook, Palmer and Beck). The complex organization of linguistic structures includes networks of phonological abstractions, as Tuggy (this volume) is able to demonstrate with diagrams. Thus, not only does reduplication reflect a complex set of meanings, but also is conveyed by a family resemblance network of phonological forms of varying degress of schematicticity, or abstractness. In short, one can say that the set of meanings predicated by Náhuatl reduplication is complex, and that this complexity is matched in phonology by a family resemblance network of forms of varying schematicity. This panoply of linguistic organization has been overlooked or downplayed by generative linguistic theories because their formalisms either do not support or do not encourage their study. Yet such phenomena are pervasive in languages around the world and, in our opinion, their study is crucial to an adequate understanding of language. Other presentations of phonological symbolic networks are found in Bybee (1985: 271) on Spanish verbs and Palmer (1996: 282–283) on *Snchitsu'umtsn* color terms.

From the promising results of these initial efforts, it has become increasingly evident that the world of non-Western languages offers a breathtaking opportunity to delve into a wide spectrum of empirical and theoretical issues, some of which are new – e. g. the shape of complex categories, and the semantics of metaphor and metonymy – and others that have hitherto resisted satisfactory explanations constructed in other linguistic theories – e. g. relativization, noun-classifier systems, causative constructions, serial verb constructions, and voicing morphology (Casad 1996). The concepts and descriptive devices of Cognitive Grammar have been remarkably useful in explaining non-prototypical structures, as well as more usual ones. It is expected that Cognitive Linguistics will be proven useful in the analysis of morphological and semantic patterns that are widely shared by both IE and non-IE languages (such as noun classifiers, factive nominalization, and container metaphors for all kinds of emotions), and also of patterns that are lacking or low in frequency in IE languages (such as spatial-psychological prefixes, anatomical pre-

fixes and suffixes, inchoative suffixes, aspectual infixing and reduplication, and lexical consonant clusters or vowelless words).

In view of the apparent potential of Cognitive Linguistics as a general theory applicable to all languages, we are surprised by what appears to be an increasing dominance of representation from English and other IE languages in Cognitive Linguistic forums. We feel strongly that the representation of non-IE languages must be expanded so that our framework early-on establishes a broad base of expertise with all of the world's major language families, thereby avoiding the insularity for which generative linguistics was so strongly criticized in its early years. If Cognitive Linguistics is to progress, it must also go beyond reformulating hypotheses based solely on the study of IE languages and, like Role and Reference Grammar, think about what a linguistic theory would look like if it were equally based upon Cora, or Tagalog, or Djirbal (Van Valin and LaPolla 1997). That is why we planned the session on non-IE languages for the Stockholm conference.

As we expected, the non-IE session generated a variety of interesting empirical and theoretical issues: To name just a few, the session included papers on the nature of causative/inchoative alternations, conceptual metaphors motivating the use of terms meaning 'face', the structure of event-conflation in serial verb constructions, the governance of grammar by culturally determined animistic magical scenarios, the use of particles to signal nominal salience, the emergence of passives from causatives, and the polysemy of active verbal morphology. The papers that appear in this volume illustrate some of these topics in the further application of Cognitive Grammar to previously unstudied and undocumented languages whose grammatical structures are often very different from those seen in English and other IE languages.

These papers are largely based on data drawn from languages that have previously received little study in terms of Cognitive Linguistics. Japanese, for example, has most commonly been discussed by practitioners of formal syntax and by typologists, whereas Thai and its congeners has mostly come under the purview of comparative linguistics. Amerindian languages have been the focus of a long tradition of extensive comparative and descriptive work, including voluminous publications consisting of complete grammars, dictionaries and text collections. Nonetheless, except for a few studies by Brugman, Casad, Floyd, Occhi, Ogawa, Palmer, Rice, Talmy, Tuggy and Velazquez-Castillo, as well as a very few others, these languages have not received much attention from Cognitive Linguistics. None has yet been subjected to a thorough analysis

leading to a comprehensive grammar written from the perspective of Cognitive Linguistics.

Indeed, Ronald Langacker, a central figure in the field, has himself developed the theory primarily using materials from English, though he certainly intends for the theory to have a wider scope of application, as evidenced by its application to the Cora spatial morphemes *u* and *a* in his introductory book *Concept, Image and Symbol: The Cognitive Basis of Grammar* (1991), as well as in some of his other publications in which he applies it to various Amerindian languages, such as Luiseño, Hopi and Cahuilla (Langacker 1988: 97–115). All these considerations point to the need for a shift of emphasis within Cognitive Linguistics in order to raise the status of non-IE languages as appropriate domains for the development of linguistic theory and to avoid lingua-centrism.

Of all the extant theories of language, we believe that cognitive linguistics offers the greatest potential for a scientific theory of language that relates syntax to semantics and studies language in a way that is consistent with current research on neural network theory as well as cultural theory. It would be a shame to waste such a promising theory by failing to exploit its full scope of application to major non-IE language families. Furthermore, any scientific claim to universal application will require giving the theory of Cognitive Linguistics the most rigorous possible testing on a sample of languages that represent the full range of the world's language traditions. This book will contribute to the advancement of cognitive linguistic theory by giving it a wider scope of application and testing it against a wider spectrum of languages.

For ease of comparison the following discussion of the sixteen papers found in this volume is organized topically. This allows us more scope for making comparisons and highlights the similarities in the analyses that are presented from paper to paper.

1. Metaphor, metonymy, polysemy and cultural models

Several papers in this volume discuss matters of metaphor, metonymy, polysemy and cultural models. Metaphor was first brought to center stage in cognitive linguistics in George Lakoff and Mark Johnson's famous book *Metaphors We Live By* (1980). Metonymy and polysemy began receiving serious attention with the publication of two landmark works by Lakoff (1987) and Ronald Langacker (1987). Lakoff's (1987) book also introduced the importance of cultural models, which he dis-

cussed in terms of *idealized cognitive models* and culturally-specific *domains of experience*. Cultural models have been given futher development in Lakoff and Johnson (1999) and Palmer (1996, n. d.). The derivative studies in this volume include Tuggy's analysis of Náhuatl reduplication, Ukosakul's discussion of the usages of Thai *nâa* 'face' and the cultural folk models that motivate them, Barlaan's lively discourse on Isnag taboo terms, Palmer's treatment of the polysemy and radial category structure of the Tagalog verbal prefixes *mag*-, *nag*-, and *pag*-, Inglis' study of the semantics of the Thai classifiers *bay* and *lûuk,* and Ning Yu's detailed description of the metaphorical usages of Chinese *shou* 'hand'.

The paper by David Tuggy is titled "Reduplication in Náhuatl: Iconicities and paradoxes." Náhuatl is an indigenous language family of Mexico, the 'Aztecan' of the Uto-Aztecan language stock. Reduplication is common throughout that stock, assumes a variety of forms and conveys numerous meanings (Langacker 1977: 128–130). Tuggy shows that the forms resulting from reduplications of a stem constitute a complex category, and that the meanings they signal form an even more complex category. Both the nature of the category and the degree of complexity inherent to it present a challenge to any formal or functional theory.

For example, a number of reduplicative patterns are phonologically related. Some of these are well established while others are relatively infrequent in occurrence. The patterns constitute schemas, and relationships between these schematic patterns can also be expressed as schemas, giving rise to a schematic hierarchy. This hierarchy, Tuggy claims, is a natural category of Náhuatl phonological structures which constitutes the phonological pole of the reduplication morpheme or complex of morphemes. This is all a bit breathtaking, but in our view Tuggy has solved an important grammatical problem that would be impervious to any of the current formal analytical frameworks.

If the phonological pole is complex, the semantic pole is even more so. Part of the complexity is that there are simply more patterns. Another part is that the phonological patterns tend to be privative: if you have one, you do not have its neighbor. At the semantic pole, however, it is usual to find cases where two or three meanings are simultaneously present and intermingled in differing degrees. In short, when combined with particular stems and particular specific contexts, the spectrum of possible meanings is vast. It would seem that a formal approach like Principles and Parameters would have grave difficulties in trying to account for this kind of data, whereas Cognitive Grammar accommodates it elegantly.

Margaret Ukosakul presents us with a detailed semantic analysis of a set of Thai idioms in her paper "Conceptual Metaphors motivating the use of Thai ***nâa*** 'face'". Her analysis is developed along the lines of Lakoff and Johnson (1980) and Lakoff (1987). A central premise of this approach is that metaphorical expressions in language are a result of metaphorical thought processes (1980: 6). Ukosakul finds that ***nâa*** is used metaphorically to represent the person and is closely related to the concepts of honor and shame. Shame, as expressed through many Thai idioms of 'face', can be seen within a sequence of several phases, including the causes of shame, as well as its consequences. This prototypical scenario of shame is very much in the same spirit as that of Kövecses' well-known model for English *anger* (1986).

The Thai scenario of shame includes causes, reactions, and actions taken to remove shame. There are five stages. They are: (1) Offending Events; (2) Loss of Honor; (3) Behavioral Reaction; (4) Recovering Honor and (5) Preservation of Honor. Underlying and motivating this scenario is a folk model that connects the body to emotions. The face, being part of the head, is sacred, while the feet are inferior. The face is regarded as the 'representation of the person' (Sanit 1975: 496). The feet, on the other hand, are considered extremely profane and dirty. For example, the phrase **khîi nâa** 'excrement face' always carries a negative connotation. The motivation behind the use of this phrase is cultural: the face is sacred for the Thai and has positive value, but excrement is dirty and has negative value. In short, for the Thai, **nâa** 'face' is metaphorically related to 'ego, self-identity, dignity and pride' (Ukosakul 1994).

The concept of the physical human face is mapped onto the target domains of the personality, countenance, honor and emotions. The emotions that are expressed by 'face' idioms are anger, happiness, sadness, fear and shame. These accord well with cross-cultural correlates (Lakoff 1987:38). The general metonymic principle underlying many of these idioms is THE PHYSIOLOGICAL EFFECTS OF AN EMOTION STAND FOR THE EMOTION (Lakoff 1987: 382).

In his delightful paper titled "Animism exploits linguistic phenomena", Rudy Barlaan, provides us with a glimpse of the Isnag culture of northern Luzon, Philippines. Like many other preliterate societies (Hunter and Phillip 1976), Isnag imposes taboos on various things, places, and activities. During the rice harvest season, many of the basic words in the vocabulary of the language also become taboo. This paper discusses two aspects of the taboo words: (a) their cognitive underpinnings and (b) the

various conceptual and linguistic processes employed in the derivation of the substitute phonological forms.

All agriculture in Isnag country is done by hand. Rice production is primarily dependent upon nature for water, sun, and other natural phenomena. The majority of the necessary elements, if not all, are beyond the producer's direct control. However, the Isnag farmer does not just relinquish his crop production to fate. He attempts to control these natural phenomena by imposing a taboo restriction on words denoting the natural phenomena, their effects, and attributes perceived to have adverse effects on rice production. Barlaan's description of the function of taboo as a form of control is well motivated, paralleling well-known accounts such as those given in (Boas 1938, Hoebel 1966, Levinson 1980), while adding to the overall field of knowledge with his particular study.

The rice production schema operates within a more comprehensive idealized cognitive model (ICM) (Lakoff 187: 68) of subsistence, which in turn operates within yet another more schematic ICM of the Isnag world view. The ICM that serves as the immediate scope of the rice production schema is the subsistence model, as follows:

We, Isnags, subsist on rice
We want to subsist well
We need sufficient rice

Barlaan notes that the substitute words hold a variety of conceptual relationships to their taboo counterparts. Commonly, the taboo word and its substitute belong to the same cognitive domain, modeling a relationship of conceptual metonymy (Lakoff 1987; Lakoff and Johnson 1980; Lakoff and Turner 1989; Langacker 1993; Kövecses and Radden 1998). For example, heat is one effect of a fire, as well as of bright, strong sunlight. Too much heat has a deleterious effect on the production of rice because it causes excessive thirst in the workmen, who must therefore take too much time off from work to go get a drink of water. In this particular case, Barlaan notes that the Isnag term is *apuy* 'fire'. The expected metonymic term would be *napasu* 'hot', but the use of this term ostensibly would be understood by the spirits and would thus have a negative effect on the harvesters. Thus, the Isnag opt for a loan word *napudut*, which also means 'hot',but presumably will not be understood by the local spirits. There are many such metonymic relationships in any reasonably complex ICM. Barlaan records relationships of part-whole, generic-specific, thing-attribute, thing-thing, activity-activity, cause-effect and reason-result.

Other conceptual mechanisms employed in the derivation of substitute words include metaphor, borrowing and descriptive paraphrase. This latter process involves compositionality. The noncompositional taboo word is substituted by its perceived compositional equivalent, which itself may be metaphorical. The example from the data articulates the Isnag view that siblings share the same umbilical cord. Thus, when *wagi* 'sibling' becomes taboo, it is substituted by *kaputad kapusgan* which literally means 'cut from the same umbilical cord'. *Kaputad* means 'cut-from-the-same-piece' and *kapusgan* means 'attached to the same umbilical cord.' This particular metaphor is widespread among Austronesian language groups (Barbara D. Grimes, p. c.).

Barlaan aptly notes that the Isnag taboo words are classic examples of folk categorization. They belong to the category of taboo terms not because they all share some necessary semantic features, but because their referents participate in or affect the wider scenarios of rice production. The criterion for membership is extrinsic. Though apparently a folk category (Taylor 1992: 72), the taboo word category does not show any prototype features.

In his paper "The Tagalog prefix category *Pag*-: Metonymy, polysemy and voice", Gary Palmer examines the hypothesis that the gerund form *pag*- and its active derivatives constitute a complex category that is important to understanding voice and lexical constructions in this Western Austronesian language. The analysis of complex categories follows Lakoff (1987) and Langacker (1987, 1991). He addresses four questions regarding the semantics of PAG-: (a) Is there a category schema? (b) Is there a category prototype? (c) Is there a well-motivated polysemous structure, that is, a set of conventional meanings explainable in terms of reasonable or natural elaborations and extensions? and (d) Can lexemes that incorporate the prefix be adequately characterized using theoretical concepts from cognitive linguistics, such as *trajector* and *landmark*, *bounded* and *unbounded process*, *temporal* and *atemporal relations*, or *profile* and *base*?

Interestingly, Palmer observes that, for Tagalog, the most salient participant in a clause – the one appearing in *ang*-phrases and marked as SPC – is a trajector. In this respect, *ang* functions much like the Hawaiian preposition *o'* (Cook, this volume). The trajector of clauses centered on active verbs (using *mag*- or *nag*-) is an agent – i. e. a source or initiator of activity. The undergoer in a genitive phrase is the *primary landmark* (lm). Secondary landmarks appear in oblique *sa*- phrases. Because they are verbal prefixes, and because verbs are inherently relational, *mag*-,

nag- and *pag*- each establish a relation between a trajector and a landmark. The nature of that relation turns out to be fairly complex and variable.

Palmer's answer to the first question is affirmative. He finds that the PAG- forms do constitute a single category in that *mag*- and *nag*- have the same range of meanings and complements, differing only in mood, while *pag*- can be regarded as the more abstract form, lacking voice, mood, and temporal bounding.

In answering his second question, Palmer concludes that the hypothetical prototype meaning for PAG- forms is *an agent applies physical exertion to set in motion some process profiled in the root or latent in the base conceptualization of the root.* His answer to the third question is also specific, i. e., the schema that subsumes all the PAG – forms is *action or process that is either profiled in the root or stem or latent in its base.* These schemas subsume both *physical* and *mental exertion*, which depend upon the notion of deliberation, first identified by Bloomfield. They also sanction a variety of mutually interrelated senses termed *distributive, intensive*, *reflexive, reciprocal* and *contraposed.*

His answer to question (d) is that the concepts of *complex category*, *profile* and *base*, *trajector* and *landmark*, *temporal* and *atemporal relations* and *bounded* and *unbounded process* have proven particularly useful in analyzing the grammar of *PAG*- forms as they appear in relatively simple lexemes. The analysis also works for more complex lexemes with PAG-constitutents and multiple affixes, explaining these constructions and elucidating translations where previous purely syntactic approaches have only provided collations of possible constructions. An example is the construction *nag-pa-dulot,* meaning '(agent) orders someone to serve food', where the notion of ordering someone to serve is latent in the scenario of serving food (*pa-dulot*) as part of its base conceptualization. The construction with *nag*- evokes this conceptual metonymy.

In "The semantics of the noun classifiers *bay/luuk* in Standard Thai" Douglas Inglis focusses on a single member of the Thai classifier system (namely *bay and lûuk*) whose semantics, in part, constitute a radial category (Lakoff 1987). Inglis specifies the central members of this category, distinguishes important contrasts among those central members, provides semantically motivated links between central and peripheral members of the category, and finally plots the different conceptual structures used by each separate category to classify overlapping subsets of container-like objects.

Inglis further views these complex categories in terms of a schematic network along the lines of Langacker (1987: 369–386)[2]. For example, the Thai classifier *lûuk*, prototypically designates fruit-like inanimate entities. But the Thai also use this classifier to designate many other entities that are not fruit-like. Both the relative size and subordination of function of one entity to another lead to a string of extended variants of *lûuk* to designate a range of objects in compound forms such as *lûuk-kuncɛɛ* [child-lock] 'key', *lûuk-dum* [child-button] 'button' and *lûuk-fay* 'spark' [child-fire]. A second chain of extension from the prototype is based on the characteristic shape of a fruit such as a mango or a papaya, i. e., an imperfect oblong. The extension involves the attenuation of the oblongness, grading into a perfect sphere. This allows *lûuk* to be applied to all types of balls used on sports, to edible entities such as fishballs and meatballs and to concrete implements such as ball-bearings and gun shot.

Inglis demonstrates that Cognitive Grammar offers an elegant account of both the lexical and grammatical structure of Thai classifiers, accounting for a complex array of data characteristic of classifiers in general.

At the lexical level, a Thai classifier serves as a schema in an elaborating relationship to both some prototype and to the variants that occur within a complex radial category. The classifier *bay*, for example, prototypically designates leaves of plants and trees. Along one line of extension, it also designates flat, thin objects such as playing cards, tickets and plates. Along a line of extension based on the association between a plant and its fruit, Thai draws on *bay* to designate watermelons and other kinds of fruit. If a watermelon were classified solely on the basis of shape, it could as well be classified by *lûuk*, but classifiers in Thai and other languages do not simply function to match features of nouns to necessary and sufficient conditions of classes (Lakoff 1987; Palmer, n. d.) A third line of extension invloves thin, flat objects that are made up of fabricated material and designate entities such as the sails of a boat, a document, a dispatch, an invoice or a receipt.

Inglis shows explicitly the structure of the semantically marked schematic relationship that the classifier bears to a given noun: the noun must belong to the subset of nouns which a given classifier sanctions by virtue of its conventionalized links to a prototype from which it diverges in terms of certain kinds of characteristics or relations, while preserving and augmenting other characteristics. For example, the classifier ***bay*** functions as a class term, a compound form in which ***bay*** is the intial member in words like *bay-máy* [leaf-tree] 'leaf'. This sanctions additional class

terms forms such as *bay-chaa* 'tea leaf' and *bay-tɔɔŋ* 'banana leaf'. *Bay* also functions as a classifier for many 'leaf-like entities'. The prototype for 'leaf' involves shape, color, flexibility, metonymic and constituent material characteristics in the overall schema that encapsulates its conceptualization. The nouns that *bay* classifies differ from that prototype in terms of one or more of those characteristics. Thus *bay* classifies entities such as cards, tickets, plates, documents, receipts, sails and propellers, as well as certain edible fruits such as the watermelon and the *rákam* fruit.

Crucially, the Cognitive Grammar account does not rule out the possibility of an instance of a noun functioning as a classifier for another set of nouns. Because CG allows for the construal of semantic content at varying levels of specificity, with concomitant variable specifications of domain relations and content, it can readily account for polysemy on this dimension.

As a limiting case of schematicity, a noun can be categorized by itself in what Inglis calls "the repeater construction." Syntactically, the numeral-classifier is the nominal head. This is supported by its behavior as a semi-independent structure from the noun: the numeral-classifier behaves pronominally in answer to questions or as an anaphoric reference to previously established nouns. This pronominal function of classifiers provides support for the notion that pronouns are schematic nouns that depend upon the conceptualizer's access to a salient reference point (antecedent) (Langacker 2000: 234–245). By virtue of its antecedent use as a classifier, a form becomes a particularly salient reference point marker. Finally, Cognitive Grammar accounts naturally for both classifier and measure terms as similar constructs by revealing that, while they both sanction the quantification of nouns, they accomplish this via different categorizing strategies intrinsic to count and mass noun structure. Thus shape and size may categorize concrete entities, whereas entities of a given color and texture might categorize mass nouns.

In his study "The Bodily Dimension of Meaning in Chinese: What do We Do and Mean with "Hands"?" Ning Yu presents lexical evidence in support of the claim that bodily experience plays a prominent role in the emergence of linguistic meaning. His study focusses on *shou* 'hand', as it is used to denote temporal and logical relations (e. g. Hollenbach 1995) and linguistic actions (e. g. Goossens 1995, Pauwels and Simon-Vandenbergen 1995). Compounds built up by combining *shou* with verbs characterize peoples' psychological states in terms of the physical states of their hands. Metonymy and metaphor work together: When we start to do something physically, we use our hands. Hands, then, have come to be

associated with the idea of "starting something" in general, including mental work that entails the use of brains rather than hands, e. g. *dong-shou* move-hand means 'start work'. The metonymy THE HAND STANDS FOR THE ACTIVITY and the metaphor THE MIND IS THE BODY both seem to be operative here.

Chinese compounds formed with *shou* 'hand', motivated by immediate bodily experiences, turn out to be the ground for conceptualizing more abstract relationships via metonymy and metaphor, supporting the claim that our living body has served as a semantic template in the evolution of our language and thought. Ning Yu concludes that some examples in this study involve metonymy only, while others involve only metaphor. But, in most examples, metonymy and metaphor interact and interplay in intricate ways for which Goossens (1995) coined the term "metaphtonymy". A genre of couplets combining metaphor and metonymy have also been observed in Náhuatl (Palmer 1996: 235–240; Oca Vega, n. d.).

2. Causativity, voice, subjectivity and reference points

Any analysis of voice and causitivity might begin with Langacker's (1999:30) notion of the *action chain*. He theorized that when a process is portrayed as "being instigated by some kind of force or energy input it is said to have an *energetic construal*." If a process involves "a series of energetic interactions, each influencing the next," it is called an *action chain*. The nominal participants in such a chain may fulfill a variety of different semantic roles. For example, a sentence such as *This key opened the door* profiles an instrument, a mover, and the relation that connects them within a chain that can be represented as (AG ⇒ **INSTR** ⇒ **MVR**), cf. Langacker (1999: 32). A sentence such as *I itch*, which does not predicate an action chain, is assigned an *absolute construal*. We draw heavily on this framework in our discussion of the papers in this section. By combining the concept of the action chain with other concepts, such as metonymy, radial categories, subjectivity, and grammaticalization, we arrive at insightful characterizations of a number of phenomena involving voice and causativity. Those discussed in these chapters include a causative/inchoative alternation in Thai, the grammaticalization pathway from causatives to passives in Asian languages and voice in emotive verbs of Finnish.

In "A cognitive account of the causative/inchoative alternation in Thai," Kingkarn Thepkanjana analyzes a verb (*pìt* 'close') that has two clusters of meanings, one centered around a transitive prototype (as in *he closed the door*) (**AGT ⇒ MVR**), the other around an inchoative prototype (as in *the door closed*) (**MVR**). Both prototypes are subsumed by a schema of closure of an accessway. Extensions from the inchoative prototype include the senses involved in expressions such as (a) 'the office closed for the day', (b) 'the registration for membership was closed', and (c) 'the stock market closed lower'. Various conceptual metonymies could be proposed to account for each of these extensions.

Transitive *pìt* is a radial category centered on a prototype. Here, we find the term used in several semantic domains, each of which presents an action chain having multiple participants. The conventional extensions are categorized by their semantic patients, which are determined by context of use. Transitive translations of *pìt* include 'to cover X with Y', 'to glue X onto Y', 'to hide or conceal X (from Y)', 'to terminate operation X', and 'to turn off X device'. Some of the extensions appear to be based on conceptual metonymy, in the sense that activities take place within an accessway susceptible to being closed off, as in the clause *they blocked (pìt) the street with a turned-over bus*. Other extensions appear to involve subjective construals, as in 'to hide or conceal X (from Y)' and 'to cover X with Y', which depend on something blocking the path of vision of the conceptualizer. Kingkarn advocates a detailed semantic analysis of the arguments that occur with verb alternations.

In "How passives emerge from causatives: A periphrastic perspective from some East and Southeast Asian languages", Foong-Ha Yap and Shoichi Iwasaki compare and contrast data from multiple languages. Their comparative perspective provides a useful check on the value of the cognitive approach. Most of the chapters in this volume analyze some aspect of the grammar of a single language studied synchronically. If Cognitive Linguistics has value as an analytic framework, the same array of concepts should be applicable to comparative and diachronic studies.

The authors note that causative forms have developed passive uses in a number of languages, for example Korean, older Hungarian, Greenlandic Inuit, Turkic languages such as Tuvinian, Altai and Karakalpak, and Manchu-Tungusic languages such as Udehe (Keenan 1985: 262; Haspelmath 1990: 46–49). In this chapter, they study the phenomenon with examples involving the morpheme 'give' and then extend it to related verbs of transfer with permissive causative meanings such as 'let'.

The authors propose that passive 'give' constructions arise from a grammaticalization path as follows:

> lexical 'give' > (permissive) causative 'give' > reflexive 'give' > passive 'give'

By "lexical 'give'" Yap and Iwasaki simply mean the word used in its prototypical sense of giving an object to a beneficiary. The "causative 'give'" or "manipulative causative" refers to senses such as 'X *makes* Y do Z', as in (1) from Manchu:

(1) *i* *bata-be* *va-**bu**-ha*
he-NOM enemy-ACC CAUS-PAST
'He made (somebody) kill the enemy.'

The permissive causative 'give' (X lets Y do Z) can be seen in (2) from Mandarin:

(2) *wǒ **gěi** nǐ cāi ge míyǔ*
I **give** you guess CL riddle
'I (will) let you guess a riddle.'
(Xu 1994: 3681)

The "reflexive-passive 'give'" (X gives self to be perceived by Y) can be seen in (3), also from Mandarin:

(3) *Lǐsī **gěi** Zhāngsān kànjiàn-le*
Lisi **give** Zhangsan see-ASP
'Lisi was seen by Zhangsan.'
(Haspelmath 1990: 481)

Finally, (4) presents a Mandarin agentless passive 'give', which might also be considered an inchoative (X gets STATE):

(4) *Yifu quan **gěi** inshi le*
clothes all GM wet ASP
'The clothes got all wet (from the rain).'
(Zhu 1982: 1781)

But there are additional steps on the grammaticalization pathway. In Mandarin alone we find the reflexive-passive, the passive, and the

agentless passive, in addition to the two forms of causative. There is a similar range of forms in Malay.

Let us now return to the action chain. We propose that what we are seeing is the extension of meaning in the verb 'give' in conjunction with a metaphorical extension of prototypical clause structures involving different configurations of action chains. Each step in the process involves semantic extension of the verb along lines defined by conceptual metonymy. To 'give' requires a concession; to 'be permissive' is to concede control; to lack control is to be susceptible to becoming a semantic patient in a passive construction. Meanwhile, the verb is used in constructions where it would not appear in its original meaning. The action chains for some of the usages are listed in (a) to (e):

(a) prototype 'give'	(**AGT** ⇒ **OBJ** ⇒ **BEN**)
(b) causative	(**AGT** ⇒ **AGT** ⇒ **PAT**),
(c) permissive causative	(**AGt** ⇒ **AGT** ⇒ **OBJ**),
(d) reflexive passive	(**AGT** ⇒ **EXP**)
(e) agentless passive	(**MVR**)

The notation of the action chain makes it clear that there is a reduction from a chain with three participants to a single participant undergoing a process. We can also see clearly that the first step, in (b), is the switch from an agent acting on an object to an agent acting on another agent. The next step, in (c), reduces the agency of the recipient to that of experiencer. Yap and Iwasaki offer explanations for why languages have only certain 'give' constructions and not others based on their preference, for example, for highly agentive and volitional subjects. 'Give' passives are most common in languages where subject-agency is weakened or lost.

The findings of Yap and Iwasaki complement those of Kingkarn, who provides a synchronic view of extension that links causative and inchoative forms. Yap and Iwasaki provide the diachronic view: a grammaticalization path from causative to passive forms (some very much like the inchoative), which is revealed by cross-linguistic comparisons. Their findings provide striking support for Langacker's claim that lexical extension is the real driving force in linguistic creativity (1987: 71–73, 190). We also see similar phenomena in languages not discussed by Yap and Iwasaki. In Hokkien, which they discussed, the use of 'give' as a transfer verb is extended to contexts meaning 'to give someone the chance to do something.' This has its clear counterpart in the the Cora (Uto-Aztecan) verb **wa-tá'a** (Casad 1998: 147–148).

Mental verbs present a challenge to cognitive linguists, because mental activity can be construed in different ways, and a single language may also offer a number of alternative construals (Langacker 1991: 303–304, Croft 1991: 212). Emotive verbs belong to the family of mental verbs. Mari Siiroinen takes up their study in her paper titled "Subjectivity and the use of Finnish Emotive Verbs". Her point of departure is with pairs of morphologically related verb forms such as *pelkää* 'X is afraid of st' and *pelotta* 'X frightens sb'. The form *pelkää* takes experiencer subjects. In contrast, the form *pelotta* takes experiencer objects. Her analysis invokes a number of factors, including the idea of a discourse topic, word order, semantic roles, the subtleties of the subjective vs. objective viewpoints, and the speaker's vantagepoint.

Siiroinen's main premise is that the entity that the speaker selects as topic of the discourse is the most central and active participant in the situation being described. Once again, the relative salience of nominals is central to the analysis, reminiscent of Cook's discussion of Hawaiian *'o* and Palmer's analysis of Tagalog PAG- (both papers, this volume). Siiroinen's use of the term "discourse topic" is to be understood as defined by Tom Givon: a topic is talked about during successive clauses in a discourse (Givón 1990: 902). Grammatical topic affects verb choice: She proposes that a verb with an experiencer subject will be chosen if the experiencer is the topic.

Word order and semantic roles interact. Whereas English uses distinct transitive and intransitive verbs for the purpose of distinguishing experiencer subjects from agentive subjects, giving us pairs such as *like* vs. *please*, Finnish derives the transitive version from its stative counterpart via a causative suffix. In addition, the neutral word order of a prototypical Finnish transitive verb is SVO as in (5):

(5)	*Se*	*pelotta-a*	*hän-tä.*
	It	frighten-3SG	(s)he-PTV
	subj		obj
	'It frightens him/her.'		

Experiencer objects with forms of the verb such as *pelotta-a* may appear in OVS order, as illustrated by sentences such as (6):

(6)	*Hän-tä*	*pelotta-a*	*(se).*
	(s)he-PTV	frighten-3SG	it
	obj		subj
	'(S)he is frightened of it.'		

This OVS use occurs frequently when the experiencer is first person. In such cases, the speaker, as experiencer, would be putting himself or herself in the "onstage" region of the viewing arrangement in an objective construal. As example (6) shows, the OVS order also occurs with third person experiencer subjects, but such usages are typically found in literary narrative, in sections with free indirect discourse. The narrator becomes a kind of tacit first person in a third person construction. Here the experiencer is subjectively construed. The conclusion must be that the OVS construction requires a first-person experiencer, whether h/she be construed objectively (profiled and on-stage in the literal interpretation) or subjectively (tacit and off-stage).

Siiroinen used a model proposed by Croft (1991: 219) which is similar to Langacker's use of the action chain. Croft theorized that the possession and change of a mental state involves two processes: "the experiencer must direct his or her attention to the stimulus, and then the stimulus (or some property of it) causes the experiencer to be (or enter into) a certain mental state." Siiroinen holds that the bi-directionality of these processes explains the variation in the subject/object assignment of the verbs. We agree in general, but it might be more precise to say that *pelkää* 'X is frightened' profiles just the first process within a conceptual base of predication which consists of the two processes together. We can also see that *pelotta* 'X frightens Y' predicates only the second process in which experiencer is caused to enter a mental state. In its OV(S) usage, *pelotta* again profiles the second process (or perhaps only its end-state), but the stimulus is reduced in prominence within the profile. The relatively high profile of the experiencer subject is consistent with first-person subjects and with the salience of experience in the free indirect speech of the narrative genre.

3. Nominals: Salience, polysemy and prototypicality

In the cognitive linguistic approach to the semantics of nominals, two issues have commanded the most interest: (1) the relative salience of nominals in clausal and discourse structure, (2) polysemy and category structure. Kenneth Cook's study of Hawaiian *'o* illustrates variations in salience, as does Satoshi Uehara's contrastive study of reflexives in Japanese and English. Uehara also details the differences in the protypes of these constructions. David Beck's study relates nominals to verbs in terms of prototypicality and conceptual autonomy.

Cook presents us with a syntax problem in his paper "Hawaiian *'o* as an indicator of nominal salience". He takes as his point of departure the observation that, given that nominal salience plays an important role in the grammars of human languages, it is plausible that a language might have a marker that indicates that a nominal is relatively more salient than the other nominals in the same clause. He proposes that the Hawaiian preposition *'o* is such a marker. The proposal conflicts with previous assertions by other linguists that 'o has multiple unrelated grammatical functions. Carter (1996), for example, has claimed that there are three distinct morphemes that have the phonological shape of *'o*: the topic preposition *'o*, the subject preposition *'o*, and a copular verb *'o*.

Cook argues that Hawaiian copular *'o* is also a preposition, rather than a verb, specifically one that precedes definite predicate nominals in certain kinds of equational sentences. His various arguments based on traditional grammatical considerations sum up to an argument for the cognitive grammar interpretation that *'o* is a marker of salience. Among other things he argues from syllable length, i. e. *'O* consists of only one short syllable. This fact in itself argues against considering it a verb. He also cites distributional facts. For example, verbs (and nouns) in Hawaiian are followed by a sequence of what Elbert and Pukui (1979: 90−104) call 'postposed phrasal elements'. In contrast, *'O* is not followed by postposed phrasal elements of any sort. Finally, Cook brings in comparative linguistics: The cognates of *'o* in other Polynesian languages have not been analyzed as copular verbs.

In *"Zibun* reflexivization in Japanese: a Cognitive Grammar approach", Satoshi Uehara presents a contrastive study of reflexivization in English and Japanese. Uehara's goals are: (1) to define the differences between English reflexives and Japanese *zibun* reflexives, and (2) to test van Hoek's (1997) theory of reflexivization, which applied Cognitive Grammar to English reflexives. His study is based on usages appearing in Japanese newspaper editorials and their English translations.

Reflexives in English can be characterized in terms of a schematic semantic value whose profile is a THING and an inventory of constructional schemas centered on a prototype. In the reflexive schema, a conceptual reference point (i. e. antecedent) is profiled as a THING and the profile of the reflexive must correspond to the profile of its antecedent. The conceptual reference point must be the one which is considered to be the most accessible by virtue of being both salient, that is, prominent and discrete, and conceptually connected with the reflexive pronoun. Another aspect of accessibility is proximity of the reflexive to its antecedent in linear order.

A strength of Uehara's paper is that he uses natural language data, rather than base his analysis on contrived sentences. His Japanese data were compiled from an examination of the occurrences of *zibun* in 150 "Tensei Jingo" daily essays, the Editor's daily notes in the *Asahi Shinbun*, one of Japan's leading newspapers. He drew his English data from the occurrences of the English reflexive forms *oneself/selves* found in "Vox Populi, Vox Dei", the English translation of "Tensei Jingo" published in the English version of the newspaper, the *Asahi Evening News*. In 150 essays, Uehara found 53 occurrences of *zibun* and 83 occurrences of *oneself/-selves*. Only sixteen out of the 53 instances of *zibun* were translated as the reflexive forms in English.

The most frequently appearing configuration in English is the one where reflexives appear in the verbal object position, as in for example, *He hit himself*. In the Japanese data, however, out of the 53 occurrences of *zibun*, only four occur as verbal objects (i. e. are marked with the accusative marker *o*). Secondly, *zibun* frequently occurs by itself in the role of clausal subject. In the English data there was no instance of the reflexive form standing alone in the subject position, and 44 out of 83 instances occurred in the object position.

To explain these patterns, Uehara lists a number of reflexive schemas that were proposed by van Hoek (1995, 1997: Ch. 7) for English. The English primary prototype schema has a coreferential subject and object, as in *Mary saw herself*. There are two viewpoint extensions: the picture-noun schema, as in *Mary found a picture of herself*, and the logophoric schema, as in *He really didn't care what happened to himself*. There is also a secondary prototype – the emphatic reflexive – with its own extensions. Uehara proposes that *zibun* differs from English reflexives in having the viewpoint constructional schema as its primary prototype. He says "the cognizer (including the speaker) who conceptualizes an entity … is the most salient reference point for *zibun*, and *zibun* represents the cognizer himself in relation to his cognized entity."

In his paper "Conceptual autonomy and the typology of parts of speech", David Beck examines how two fundamental concepts of Cognitive Grammar-*prototypicality* and *conceptual autonomy*-allow us to tackle a particularly difficult linguistic problem, i. e. to characterize the semantics of parts of speech in a way which permits cross-linguistic comparisons. His solution unifies a range of morphosyntactic phenomena which previously were treated in distinct and unrelated manners.

Beck argues that nominal and verbal semantic prototypes represent the ends of a continuum of conceptual autonomy running from the core semantic domain of nouns as semantic THINGS to the core domain of verbs as semantic RELATIONS (Langacker 1987b). Intervening points on the continuum are occupied by meanings which vary cross-linguistically with respect to their morphosyntactic *closedness*. Beck's usage of the term 'closedness' is rather distinct from the usual usage of the term to apply to word classes, signalling the potential that any class has for admitting new members without entailing any substantial reorganization of that class. In particular, he is using it in the sense of conceptual autonomy; that is, speakers can conceive of *dogs*, *jars* and *balls* as discrete, self-contained entities in their own right without invoking larger conceptual frameworks, whereas speakers must conceptualize the participating entities when they speak of activities such as *running, driving* and *reading*. In short, Beck's 'closed' linguistic entites can participate in larger expressions without any kind of morphosyntactic modification. By inference, his "open" category resembles Langacker's (1991) notion of *conceptual dependence.*

Linguists traditionally distinguish between inalienable possession, inherent possession and ordinary nominal possession. Beck treats these distinctions as a gradient difference along a continuum between the construal of the salient "nominal" entity in the noun's meaning as having either a canonical or a classificatory landmark. For Beck, a canonical landmark is a discrete, individuable nominal entity that obligatorily occurs in a given type of construction without any accompanying morphological embellishments. In contrast, Beck's *classificatory landmarks* represent a schematic or abstract element whose expression in the clause requires the application of non-inflectional, meaning-bearing elements. Classificatory landmarks (CLMs) include not only reference-points, but may also include the verbal-classificatory elements found in certain languages, such as the Navajo stem *Nilá* 'handle slender flexible thing' (Young and Morgan 1987), as well as schematic "nominals" inherent in the verb's semantic profile, as in *Snchitsu'umtsn* $l\text{ʕ}^{w}$ 'pass through a narrow place.

Languages seem to form a morphosyntactic cline running from systems of the English type, where the classificatory landmarks of relational nouns such as kinship terms are accorded no special status, through languages like Hawaiian and Mandinka where their special status is recognized by the use of a dedicated set of optional possessive constructions, to

Upper Necaxa [Totonac], where the possessors of such nouns are profiled landmarks and become obligatorily elaborated expressions of fully individuable entities.

Beck concludes that the use of such an approach as cognitive grammar is a decided advantage over formal theories based on the constructs and conventions of mathematical logic in that cognitive grammar allows us to appeal to shifts of profile and differences in construal for modeling the cross- and intra-linguistic distinctions between cross-class minimal pairs such as *(to) attack* > *(an) attack*: In summary, a cognitive approach allows for the inherent relationality of both verbal and nominal expressions and accounts for the fact that relational and deverbal nouns pattern with the expression of more prototypical semantic THINGS in terms of profiling.

Several other papers in this volume illustrate other aspects of the complex semantics of nominals and the role of nominals in grammaticalization processes. Inglis' study, for example, shows that, at least some of the Thai classifiers find their roots in nominal forms of the same shape and similar meanings. The study by Margaret Ukosakul clearly sets out the pervasive role of body part nouns in shaping an elaborate system of cross-cutting metaphors. Much the same point is illustrated by the usages of Chinese *shou* 'hand' discussed by Ning Yu.

4. Spatial semantics: Locatives

Although generative theories of grammar continue to give little attention to the role of spatial terms in syntax, the importance of such terms to grammatical theory found an early proponent in Louis Hjelmslev who claimed that the entire Indo-European case system found its roots in a set of locative adpositions and showed a number of extensions from spatial adpositions to grammatical case markers (Hjelmslev 1935, 1937). This finds a later variant in Anderson's Localist Theory of case (Anderson 1962). A series of publications on the semantics of Tarascan suffixes of space by Paul Friedrich anticipated some of the central tenets of Cognitive Grammar and brought spatial semantics in Amerindian grammars onto the stage of modern anthropological linguistics (Friedrich 1969a, 1969b; 1970; 1971). This was reinforced by Len Talmy's work on the semantics of Atsugewi spatial terms (Talmy 1972, 1975, 1983). A comprehensive view of concerns with spatial terms within the framework of Cognitive Grammar is found in the collection of papers published in Pütz

and Dirven (1996). Several cognitive and cultural studies of spatial language in Austronesian and Papuan languages appear in Senft (1997).

In this volume, we present additional papers on spatial language in three unrelated languages: Cora, a Southern Uto-Aztecan language of Northeast Mexico, Wanca Quechua, a language of the Quechumaran group of the Andes, and Thai, a language of the Tai family of Southeast Asia.

In the study "Cora Spatial language, Context and Conceptual Metaphors", Eugene Casad continues his exploration into the intricate semantics of the Cora locative system. Here he focusses on the combination of distinct locative prefix sequences with the single verb stem *'ɨcee*, which he glosses as 'pass by a conceptual reference point'. The prefixes and verb stem yield a variety of metaphorical expressions for talking about everyday goofs, shortcomings and failures (cf. Casad 1997).

Casad brings different types of evidence to bear on his analysis. First, he carefully describes the contexts of usage and he seeks out native-speakers' intuitions regarding usages and meanings. Some of the examples he uses came from real life situations when he was with Cora speakers and reflect mistakes made while driving or failure to meet an appointment on time. These two steps yield a Cora cultural model for describing mistakes. For example, the spatial usage of *a-ii-ká-'ɨ¢ee* means that someone's foot steps over the edge of a board laying flat on the ground with the result that the foot twists downward. Once one knows that, then it makes sense to explain the metaphorical usage of the same form as meaning that someone got distracted in terms of a force dynamics model involving someone's mental contact with a proper object of attention getting pulled away and downward to an inappropriate focus of attention.

Secondly, his analysis draws on cultural information. Cora ritual offices are held for a year. They consist of varied duties to be carried out throughout the entire annual calender cycle and are turned over to a new person each year, so that the long term exercise of the office calls on distinct persons to carry out essentially the identical set of duties year after year. They draw a metaphorical connection between the spatial schema of encirclement (the source domain) to the social scenario of the ritual round (the target domain). This elaborate conceptual metaphor shows the importance of cultural schemas in linguistic interpretation (Palmer 1996: 116, 132). This metaphor produces such constructions as *ja-uu-tá- 'ɨ¢ee* 'he blew it royally' and *ja-uu-t*^{y}*áh-turaa* 'he made a mistake', based on a different metaphor, as indicated by the choice of a different verb stem, which means 'to lack st.'.

Thirdly, to understand some of the usages of -'*i¢ee* it is necessary to examine conceptual reference points in distinct domains. Within the domain of topography, for example, the upper edge of a cliff will often be taken as a conceptual reference point, whereas in the temporal domain, time of arrival at a place would constitute such a reference point.

The prototypical usage of this construction instantiates the high level conceptual metaphor TO ERR IS TO MISS THE MARK, whereas the specific usages reflect a set of lower level conceptual metaphors, specific to particular domains (cf. Croft 1993). For example, the expression *ja-uu-tá-'i¢ee*,whose specialized meaning is 'he failed ritually, has generalized to mean'he blew it royally'. In this extended sense it is used as a paraphrase for specific versions such as *janá-i¢ee* 'he is late for his appointment. In other words, a field of related conceptual metaphors can be modelled as a schematic hierarchy like those associated with lexical items and grammatical constructions (Langacker 1987: 381, 409ff.; 1990: 26, 279). The results of this study thus converge with Grady's findings that conceptual metaphors are hierarchically related in "family" assemblages, with higher level "primary" metaphors paired with lower level ones that motivate specific usages (cf. Grady 1996). The prototypical usage is itself metaphorical and highly specialized, and is centered on the civil-religious hierarchy, which is an important institution in Cora society (cf. Hinton 1961, 1964).

In "Completion, commas, and other 'downers': observations on the Wanka directional suffix -*lpu*", Rick Floyd focusses on the semantics of -*lpu* 'down'. He suggests that non-directional senses are coherently motivated extensions of its prototypical usage in the spatial domain. In addition, he finds that the various senses parallel many of the same kinds of extensions observed for English.

Floyd suggests that *down* prototypically involves involves a constellation of notions: Within spatial domain there is specification of a vertical axis, with the designation of distinct points along its extension. Speakers must scan along the axis away from a horizontal landmark and assess the displacment of points from the horizontal. This analysis is highly reminiscent of the analysis given for Cora *ka*- 'down' in Casad (1982: 381ff.).

Within the domain of physical space, *down* commonly refers to a wide variety of configurations, some of which differ quite radically from what is embedded in the prototype. For example, Floyd notes that such spatial extensions include surrogate verticality, endpoint of a path and location

'away from here'. Furthermore, physical space is only one of numerous domains within which the concept *down* has instantiations. Other domains include the auditory, the social, and the emotional.

Floyd also cites grammaticalized versions of *down* in the domain of tense and aspect. These include signalling the termination of an event, the success of an event and the conclusion of an extended period of time. All three senses appear to involve the endpoint transformations of TERMINATION FOR PATH, which is a kind of metonymy. The use of *down* for the success of an event appears to depend on an additional conceptual metonymy based on the experience that success of an event is judged at its termination. Thus, Floyd's findings support the growing body of work that points to the importance of metonymy in motivating semantic extension and grammaticalization (Barlaan, this volume; Barcelona 2000; Dirven and Pörings 2002; Heine 1997; Kingkarn, this volume; Lakoff 1987; Palmer, this volume, n. d., 1996, 2000; Panther and Radden 1999).

In "Holistic Spatial Semantics of Thai" Jordan Zlatev approaches spatial semantics from the standpoint of the utterance itself as its main unit of analysis, noting that all such units are embedded in discourse and in a background of practices. Thus, he characterizes his approach as *dialogical* (cf. Wold 1992) and more importantly for the present context – *holistic*, i.e his approach aims to determine the semantic contribution of each and every element of the spatial utterance in relation to the meaning of the whole utterance – a desideratum that can be traced back to Frege's (1953 [1884]) "context principle".

Zlatev's conceptual framework of *situated embodiment* (cf. Zlatev 1997, in press), incorporates the principle of *embodiment* (cf. Johnson 1987) emphasized within cognitive semantics, but complements it with Wittgenstein's (1953) view of language as "forms of life" embedded, or *situated,* within socio-cultural practices. The major descriptive category that this theory employs is that of a *minimal, differentiated language game* (MDLG). An MDLG is *minimal* since it involves only a single utterance, which constitutes the minimal "move" in discourse and may be regarded as a minimal independently meaningful unit of language; it is *differentiated* because neither utterance nor situation are monolithic, but rather are divided into categories of elements; it is a *language game*, since the utterance and the situation are interwoven as aspects of a given linguistic practice (e. g. asking for directions), where language is not simply "a picture of reality".

He uses this theory to analyze the structure and semantics of spatial utterances in Thai and tries to show that HSS allows a perspicacious analysis of the complicated semantic and syntactic interdependencies between the members of a number of distinct form classes.

He concludes with the following observations about Thai spatial language: First, it is clear that a theory of spatial semantics must consider the interaction between *closed-class* (grammatical) and *open-class* (lexical) expressions, rather than focus exclusively on the first. Contra the theories of Talmy (1988) and Svorou (1994), in Thai, the typical closed classes of *prepositions*, *region nouns* and *class nouns* do not differ qualitatively from the open class of *verbs* with respect to their spatial semantics.

Second, the widely-held typological distinction (cf. Talmy 1985) between "verb framing languages" (e. g. Spanish) – with Path being expressed by verbs and Manner by other means – and "satellite-framing languages" (e. g. English) – with Path being expressed by particles or prefixes and Manner by verbs – is inadequate for at least some languages. Therefore, the verb-framing/satellite-framing distinction is not universally valid. Thai (as supposedly other serial verb languages) has classes of path verbs and classes of manner verbs. Neither type appears to be dominant. Finally, it is possible to combine a dialogical, holistic approach to language with rigorous grammatical and semantic analysis, giving rise to generalizations about form classes and their meanings. We might add that the failure of the framing distinction also argues for a more analogical approach with category gradiants, such as the approach pursued by Beck (this volume) and advocated by Langacker (1991: 1) and Bybee (1985).

5. Comparisons and contrasts

Achieving descriptive adequacy is non-trivial and is essential to establishing the validity of the explanations that one gives of those data. One needs to attend to both similarities and differences in expressions that are functionally equivalent cross-linguistically. In "What cognitive linguistics can reveal about complementation in non-IE languages: Case Studies from Japanese and Korean", Kaoru Horie seeks to account for similarities and differences in the complement systems of these two languages. He approaches this problem from a broadly conceived Cognitive

Linguistics viewpoint, and links his analysis to the findings of Linguistic Typology, particularly the theory of Comparative Typology presented in Hawkins (1986).

Japanese and Korean both have SOV word order, agglutinating morphology, case-marking systems, and subject honorification. Horie finds similar patterns of form-meaning correspondence in terms of iconicity and grammaticalization. In particular, he concludes that Japanese and Korean complementation follow Givon's binding hierarchy and manifest similar patterns of form-meaning correspondence sensitive to the degree of influence exerted by the matrix agent on the complement agent.

The gist of the binding hierarchy is that the degree of force exerted by the agent of a matrix clause over the agent of a complement clause correlates with the degree of morpho-syntactic restrictions that are imposed on the complement clause.

Complement-taking matrix verbs can themselves be arranged on a "binding hierarchy." Examples of verbs with strong binding force are the English "manipulative verbs" *make* and *cause* and "modality verbs" *begin* and *succeed*. Examples with intermediate binding force are verbs of emotional involvement, such as English *hope* and *want*. Examples with weak binding force are English "cognition-utterance verbs" *know* and *say*.

The correlation is iconically motivated, as Horie shows from the contrast between manipulative verbs and cognitive process verbs.

In the case of manipulative verbal suffixes, i. e. Japanese -*(s)ase*-, Horie notes that it is not even clear whether a sequence of the manipulated noun phrase and the verb stem, enclosed by square brackets in sentence (4) below, can be identified as an instance of a "complement clause". It looks as though strong binding is indeed in force.

(4) a. *Hanako-wa [Taroo-{*ga/o/ni} ik]-ase-ta.*
TOP NOM/ACC/DAT go-CAUS-PAST
'Hanako made (or let) Taro go.'

In contrast, the complement clauses of "cognition-utterance" verbs occupy the lowest end of the semantic binding scale. Their nominals are allowed essentially full morpho-syntactic and pragmatic independence from the matrix verb: the agent noun phrase receives nominative case-marking, whereas the complement predicate retains independent aspect, tense, modality and formality marking and takes an agent noun phrase highlighted as the topic of the sentence, as illustrated in sentence (5).

(5) *Hanako-wa [Taroo-ga sono hon-o {kau/katta}]*
P.N. TOP P.N. NOM *that* book-ACC buy:IMPERF/buy:PERF
no-o mi-ta.
NOML-ACC see-PAST
'Hanako saw Taro buy a book/Hanako saw Taro as he bought a book.'

Horie finds that Cognitive Linguistics provides tools that are useful for capturing crosslinguistic similarities. It also excels in highlighting differences between languages of very different typological profiles, e. g..“satellite-framed languages” vs. “verb-framed languages” (cf. Talmy 1985, 1991, Slobin 1996). But the distinction between “satellite-framed” and “verb-framed” provides no help in the comparison between Japanese and Korean, because both are verb-framed. Word-order and case-marking criteria both fail here also. But perhaps Horie was just looking in the wrong place for help from Cognitive Linguistics. There seems to be no *a priori* reason to expect Slobin’s framing distinction to provide the solution to a problem in clausal interdependencies. In fact, Givon’s theory of binding used by Horie appeals to verbal semantics in a way that is very compatible with Cognitive Linguistic approaches. It might be developed further by applying Langacker’s (1991: 189–202; 2000: 62–67) notion of active zones which can be used in the analysis of entities which interact, as would be implied by manipulative verbs, for example

Future studies

Since our aim is to encourage cognitive linguists to pursue studies of non-IE languages, we would be remiss if we did not take this opportunity to suggest some promising areas for future research. In fact, there is no topic within cognitive linguistics that has exhausted the possibilities. One contribution of cognitive linguistics has been to call attention to whole new areas of investigation, each with a range of problems inviting systematic study.

The most striking new discovery appearing in this volume is Tuggy’s demonstration that, in Náhuatl, a Uto-Aztecan language, a complex phonological network of reduplications is related to an even more complex semantic network involving such concepts as repetition, augmentation, diminution, and distribution in space. Tuggy’s approach opens a vast new research area that very likely would never have been conceived within a

formal generative framework. Other groups having languages that utilize reduplication to express a similar range of concepts include Austronesian, Bantu, Finno-Ugric, and Salish.

The topic to which cognitive linguists have directed the most sustained attention is spatial semantics. These studies have examined the compositionality and polysemy of spatial morphemes and the metaphorical and metonymical motivations for semantic extension and change. But even in this domain, literally thousands of languages remain unstudied. Our minimal goal as scientists should be to accumulate comparable descriptions of spatial expressions in all the major language families.

Cognitive linguistic studies of noun classifiers as radial or polycentric categories have now appeared for Dyirbal, Japanese, Shona, and Thai, but few other languages have received similar attention. Studies by Lakoff and by Palmer have shown that *cultural scenarios* or *domains of experience* are primary sources of the conceptual metonymies which are prevalent in classifier semantics. The investigation of cultural motivations for grammatical categories in other domains than noun classifiers is itself an area that begs for further research, as shown by this volume's papers by Barlaan, Casad, Ukusakul, and Ning Yu. Furthermore, the study of classifiers connects to the study of verbs, such as the well-known classificatory verbs of Apache, and it connects to the study of phonology and sound symbolism, as seen in the phonological noun-classifiers of San (Bernardez n. d.).

Beyond classifiers, the grammar of nominals presents a vast domain of study. Here one thinks of the need for studies of how languages variously profile relations and boundaries of concepts. There is a need to explore the gradient from autonomous nominal forms to dependent verbal forms, as Beck has done in this volume. There is also a need to apply Cognitive Grammar to notions of possession using Langacker's concept of the *reference point*. Patterns of noun compounding should also be studied.

All of the traditional grammatical problems pertaining to verbs − voice, transitivity, ergativity, etc. − can now be studied with a new set of concepts, including, but not limited to, *salience, figure and ground, profile and base, metonymy, active zones, e-sites, temporal and atemporal relations,* and the *action chain*. Beyond a few studies of Japanese and Korean verbs, very few studies of non-IE verbs have been conducted within the cognitive linguistic framework. Newman's volume on the linguistics of 'giving' is a notable start in this arena (Newman 1998). Studies in this volume by Fung Ha Yap and Iwasaki, Palmer, Siiroinen, Thepkanjana

and Zlatev have made a tiny additional contribution. Palmer, for example, investigates only the Tagalog prefix category PAG-, leaving the verbal prefixes *PA-, -in, -an*, and *-i* and all other aspects of verbal semantics to future studies. Even within the *PAG-* category, there are aspects that will reward further study.

The fact that only one chapter in this volume deals with interclausal dependencies does not, in our opinion, suggest that Cognitive Linguistics is not up to the job. Rather, it shows how much remains to be done. Horie concluded that he needed to look beyond Cognitive Linguistics for the solution to the problem of clausal interdependencies, but we think that his use of Givon's *binding hierarchy* fits the Cognitive Linguistic framework quite well indeed. A refinement of Givon's distinctions using Langacker's concepts of *active zones*, *reference points*, and perhaps even the *action-chain*, might work even better. But this approach presumes substantial prior studies of verbal semantics.

The topics of discourse and anaphora in non-IE languages have scarcely been touched within the framework of Cognitive Grammar. They present problems that are similar to those presented by interclausal interdependencies. The concept of reference points (Langacker 2000: 234; van Hoek 1997) and related notions of identifiability, accessibility, and the "one new idea constraint" (Chafe's 1994) are proving useful in the study of discourse. Palmer (1996: 206−212, n. d.) has proposed that discursive particles be analyzed not as as mere non-propositional forms (Stubbs 1983), non-referential indexicals (Silverstein 1976), conversational reflexes, pointers, meaningless elements, or strategic moves (Clark 1996) that are qualitatively different from other terms, but as terms that predicate much as other terms do, thus enabling their study within the framework of Cognitive Linguistics. These concepts should be tested on non-IE languages.

Even this rather long listing of possible areas of investigation barely scratches the surface. Any reader of this volume can probably list dozens more grammatical phenomena of theoretical interest. Studies may be based on traditional grammatical categories, such as "transitivity" and "clause structure," or they can be based on semantic domains, such as spatial terms, the language of emotion, or the language of thinking. Each of these connects to other domains and problems. Ning Yu's series of studies of Chinese metaphors of the body show the vast amount of work required to exhaust even a single domain within a single language. But it will be worth the effort, because such studies will expand our understand-

ing of what it means to think and to speak. The work before us is immense but it will be hugely rewarding.

To close this discussion, the sixteen papers of this volume are presented in groups arranged geographically, first, papers discussing languages of the Americas, followed by papers discussing phenomena from languages along the Western Pacific Rim and up into East Asia. Then comes a paper from Northern Europe and the volume is closed with a typological paper that discusses data taken from a variety of languages.

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Completion, comas and other "downers": Observations on the semantics of the Wanca Quechua directional suffix *-lpu*[1]

Rick Floyd

1. Introduction

The Quechua dialects of central Peru have a set of "directional" suffixes that in the Wanca dialect[2] appear as *-ycu* 'in', *-:lu*, 'out', *-lcu* 'up' and *-lpu* 'down'. The spatial-directional nature of these suffixes can be appreciated in the following:

(1)
a. *yaycu-*[3] 'enter'
b. *yalu-* 'exit'
c. *jiyalcu-* 'go up'
d. *jiyalpu-* 'go down into something'
e. *ćhulcu'-* 'to load up'
f. *ćhulpu-* 'to unload'
g. *śhalcu-* 'to stand up'

While these suffixes prototypically have "directional" type meanings, closer examination reveals a broader range of non-directional uses. This is fully in line with Taylor's (1989) observation that grammatical categories are typically polysemous.

Here I will focus exclusively on the Wanca directional *-lpu* 'down'. A number of grammars of Quechua languages show examples of non-directional uses of a cognate directional suffix (cf. Cerrón-Palomino 1976, Cusihuamán 1976, *inter alia)*. Although a few authors recognize certain of these as "metaphorical" or "figurative" (cf. Weber 1989: 123, Parker 1976: 126), either the precise nature of the metaphor and its motivation remain unexplained or the meaning is such that a clear connection to a basic directional sense is at best difficult to perceive. This study is an attempt to begin to fill this explanatory gap. I will suggest that the non-directional senses of this suffix are coherently motivated extensions of prototypical usage in a spatial domain. After illustrating some of the notions that enter into an adequate description of prototypical *down* in

English, I will then move to a consideration of specific Wanca examples. Data from a number of unrelated languages attests to the cross-linguistic nature of such paths of semantic extension. The present study is presented as an initial incursion into a larger investigation of the other members of the set of directional markers in Wanca Quechua.

2. A few theoretical preliminaries

I assume a non-modular, cognitive view of grammar as articulated primarily in the works of Langacker (1987, 1991) and Lakoff (1987), which does not recognize any firm divisions between syntax, semantics and pragmatics. Although proponents of cognitive approaches to linguistics maintain divergent views on many issues, there are certain tenets that characterize them in general. Of particular importance to the present discussion is the notion of a category structured around a prototype, i. e. "a best example" of a certain category. It is assumed that lexical concepts have clearly identifiable conceptual centers but are surrounded by vague boundaries. It is also assumed that linguistic units are normally polysemous and that multiple senses are linked together through relationships of schematicity and extension to form categories that have a "network" or "radial" structure (cf. Langacker 1987, Lakoff 1987). In addition, a cognitive approach rejects a firm distinction between semantic and encyclopedic knowledge. Consequently semantic studies cannot ignore the experiential and cultural background of the language user.

3. Towards a characterization of *down*

Prototypical *down* invokes a somewhat complex array of concepts. Initially, of course, it must appeal to the basic domain of space organized in terms of vertical and horizontal dimensionality. A horizontal axis serves as a fixed reference from which verticality is assessed; specifically the latter is determined as spatial displacement from the former. The vertical axis has particular prominence since it is along this extension that *down* selects distinct points for conscious registration. The selection of any point along the vertical axis entails an assessment of its displacement from the horizontal landmark (cf. Figure 1).

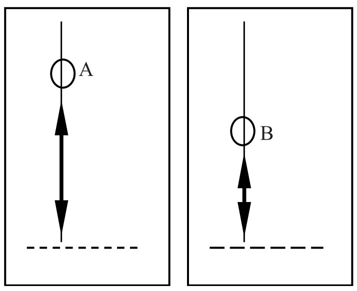


Figure 1. Vertical Displacement

Naturally if two distinct points A and B are selected along a vertical axis they will automatically differ in their displacement from the horizontal.

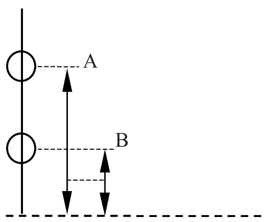


Figure 2. Comparison of Vertical Displacements

Down has this static configuration as its conceptual base and then attaches varying levels of prominence to its particular features. The point (or region) with the greater displacement from the horizontal axis, and the horizontal axis itself serve as primary and secondary landmarks (lm), and the point (or region) with the least displacement from the horizon is designated as the trajector (tr), i. e. the entity accorded the most conceptual salience in the relational profile (cf. Figure 3).

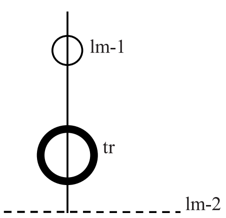


Figure 3. Down-static

In addition to this static configuration 'down' involves using the primary landmark as the starting point for scanning in order to locate the trajector, illustrated in Figure 4. This is the sense that obtains in a sentence such as *Ryan's down there* or *Ryan's down here* where a mental path is traced from some landmark to the trajector.

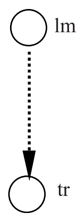


Figure 4. Path and scanning

Figures 5 and 6 illustrate that the path can be traversed either objectively as in the case of a balloon floating down, or subjectively as in *The roof slopes down*. In either case, the path amounts to a conflation of the distinct positions which are consciously registered.

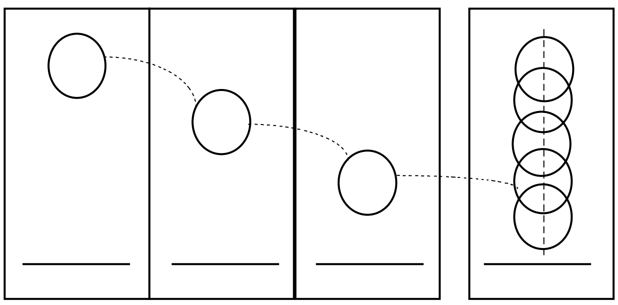


Figure 5. Balloon

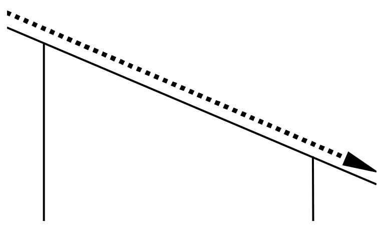


Figure 6. Roof

The bottom line is that *down* attributes a measure of conceptual salience to a point or region at the end of the path that is scanned as vertical displacement decreases.

A couple of remarks about the horizontal landmark are in order. In addition to its function in the assessment of the locations of individual points along the vertical axis, and being the location toward which the motion or scanning proceeds, it serves as a boundary. Things that move down do not do so indefinitely; rather there is a point at which an item moving toward the earth potentially contacts the surface and cannot proceed any further in an unhindered manner. Our experience continually reinforces the association of *down* with termination of movement, whereas horizontal motion is basically unhindered.[4]

By way of summary, then, I suggest that *down* prototypically involves:

- the spatial domain
- a vertical axis, and the designation of distinct points along its extension, accompanied by an assessment of their displacement from the horizontal
- scanning along a path
- a horizontal landmark toward which scanning occurs, and which additionally serves as a conceptual boundary

3.1. Elements within spatial uses

Let us consider a bit more carefully the elements of verticality and the path.

3.1.1. Verticality

Figure 7 shows that a relationship of strict verticality is not required between the principle landmark and the trajector. *Down* is, of course, an adequate description of points B, C, and D even though there is horizontal displacement with respect to A's location.

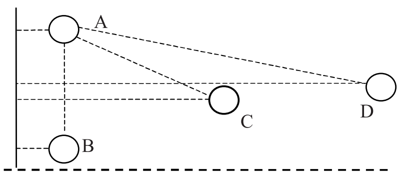


Figure 7. Verticality and Horizontal Displacement

3.1.2. The Path

The details of the shape of the downward path appear to be of only secondary importance as they can vary widely.[5] For instance, from where I live in Peru at 11000 ft. I may say *I'm going down to Lima* even though this requires first climbing to 16000 ft before dropping to sea level. Or if I am in the studio audience for "The Price is Right" and I hear *Rick Floyd, come on down!* I would move from my seat up in the audience to the floor and then up to a stage. Or we may speak of the stock market going down even though there may be intermittent multiple rises and falls. So what appears to be important is the overall vertical displacement between the beginning and end of the path and not the details of the path's shape (cf. Figure 8).

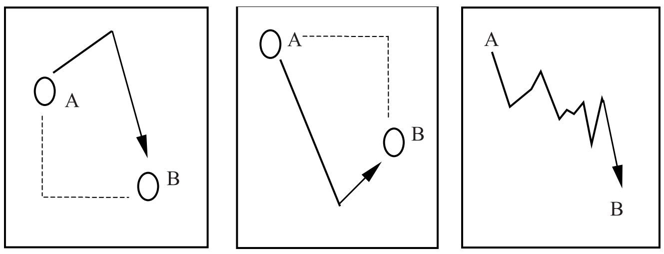


Figure 8. Path Variations

3.2. Extensions in the spatial domain

However, in spite of the apparent centrality vertical displacement has, we find interesting extensions of how *down* is actually used.

3.2.1. Surrogate verticality

Compare:

(2) a. *His fingers ran up and down her back*
b. *His fingers ran up and down the keyboard.*

Unless we are referring to an accordion, we tend to think of keyboards as being oriented horizontally, not vertically. So in (2b) we are actually referring to left-right spatial movement, not vertical.

It is not difficult to imagine what might be involved in motivating this extension. This is summarized in Figure 9 showing a network of associa-

tions between pitches as conventionally represented on a music scale with up/down orientation and their corresponding locations on the horizontal keyboard, resulting in what we might call 'surrogate verticality' or 'verticality by proxy'.

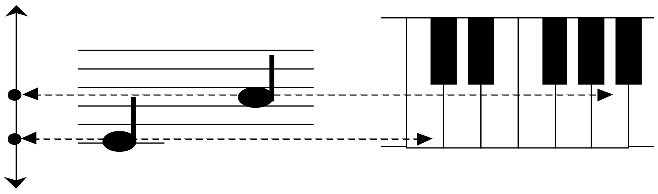


Figure 9. Scale and Keyboard

The point worth noting is the fact that something apparently so basic to the prototype is of only secondary relevance here.

We observe the same thing in:

(3) *Last Christmas my friends from Minnesota came down to Peru.*

Of course, there is not any kind of vertical displacement between two points: i. e. Minnesota is not located physically above Peru along a vertical trajectory. In fact, in terms of the objective reality, the surface of the earth, which prototypically serves as the landmark towards which there is motion, in this case actually defines the trajectory of the path (cf. Figure 10). Clearly, the extension derives from conventionally associating *up* and *down* with compass points North and South, as typically represented on a vertically oriented wall map: North is *up* and South is *down*.

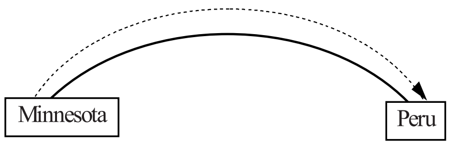


Figure 10. 'down to Peru'

3.2.2. Down as the endpoint of the path

Consider the use of *down* in:

(4) *Pass the potatoes down.*

In the right circumstances (4) may clearly have a vertical sense, for example, if the request comes from a person dining underneath the table. However it is more likely that this will be interpreted as a request to pass the potatoes *along* the table towards the speaker without any reference to physical verticality.

Similarly I have heard utterances such as those in:

(5) a. *I'm going down to the plaza.*
b. *He's down at the post office.*

spoken in direct violation of any considerations of physical verticality, since in this particular town the plaza and the post office are technically upriver from where these were spoken.

So what happened to vertical displacement? It seems that the verticality so central to the prototype, is basically irrelevant here. Nevertheless, utterances like this are quite common. I suggest that what we have here is the removal of all vertico-horizontal dimensionality leaving us with only the notion of movement along a path towards an endpoint. What is communicated by these examples is simply that the plaza, the post office, and the guy who wants the potatoes are located at the end of some path that the speaker mentally scans, not that they are below him on a vertical axis.

Related to the previous use, *down* can be used to refer to a location "away from here":

(6) a. *That's the way we do it down on the farm.*
b. *Everyone is always so friendly down at the "home".*

where "here" is associated with the primary landmark, or the origin of a scanned path.

The point I wish to emphasize is that even in its fundamental domain of space, *down* is used to encompass a wide array of static configurations, movements, and extensions from the prototype, and that even the elements most central to the prototype may be found to be suspended or ignored in certain cases, while other notions such as scanning and path take on particular prominence to motivate and sanction a particular use.

3.3. In the temporal/aspectual domain

Extensions from the domain of physical space into other domains are, of course, well-documented. For example, *go*, which typically profiles motion along a physical path, has been extended into the temporal domain as a marker of future tense in English as well as in many other languages (cf. Sweetser 1988 *inter alia*). So the fact that we should find extensions of *down* in the temporal domain should come as no great surprise. In this domain we find a number of conceptualizations related to termination. For example consider the role of *down* in:

(7) *The party is winding down.*

or

(8) *How will I ever live this down?*

Here, *down* focuses on the completion of some activity or the cessation of a state or condition. Similarly compare:

(9) a. *I'm going to pass these clothes on to your cousins.*
b. *I'm going to pass these clothes down to your cousins.*

These show that *down* evokes the conceptualization of the conclusion of an extended period of time during which some item has been possessed. *Pass down* cannot be used as felicitously if, for example, the clothes have just been bought at the store, they are still in their packaging and their intended wearer hasn't even tried them on.

The examples in 10 show that *down* can be used to convey both termination and success of an activity. *Tracking a person* is different than *tracking them* ***down***.

(10) a. *track a rumor down*
b. *track a person down*

It is not surprising that "termination of activity" would emerge as a conventionalized sense associated with *down*. In our experience with falling objects, they reach the barrier of the ground and activity ceases. In fact, this use differs only minimally from others we have already examined. We have seen a progression where the central notion of verticality becomes irrelevant in some cases leaving only movement along a spatial path. The

temporal use simply involves taking this progression one step further and eliminating the very concept of “spatiality” itself. What remains is only the notion of the conceptual scanning of a non-spatial path, i. e. rather than action through time situated in space, here we have only the concept of an action through time.

3.4. In other domains

We also find extensions of *down* in the auditory domain:

(11) *Turn the TV down.*[6]

(11) is much the same as a couple of previous examples, in that it reflects some measure of surrogate verticality involving a complex of two metaphors. Once we recognize the metonymy, i. e. *TV* standing for *volume*, we see that intensity of volume is conceptualized in terms of a physical quantity, which is then subject to potential manipulation according to the dictates of the UP IS MORE metaphor (cf. Lakoff and Johnson 1980).[7, 8]

Down is also extended into the social domain (12) as well as into the domain of emotion or psychological states (13).

(12) a. *to talk down to*
b. *to look down on*

(13) a. *down in the mouth*
b. *down on me*
c. *down and out*
d. *down in the dumps*

I am sure there are other domains in which *down* has extended itself. The point here is to simply illustrate a portion of the domain matrix for this directional label in English and lay a conceptual foundation for the discussion of the senses of -*lpu* in Wanca.

3.5. Recap

We expect to find a high degree of cross-linguistic uniformity in basic and universally shared concepts such as verticality. Thus the characterization of English *down* lays the conceptual foundation for the discussion of the senses of -*lpu* in Wanca.

To summarize thus far, a characterization of the *down* concept prototypically involves a constellation of notions: vertical and horizontal axes situated in physical space; the selection of points (or regions) along the vertical axis for conscious scrutiny; the horizontal axis serving as a canonical reference point; the assessment of the selected points' displacement from that reference; a comparison of these displacements; scanning along a conceptual path, and the potential limitation of that movement by the horizontal reference point which acts as a boundary.

Within the domain of physical space, *down* commonly refers to a wide variety of configurations, some of which differ quite radically from what is embodied in the prototype. Furthermore, physical space is only one of numerous domains within which the concept *down* has instantiations.

In the following section I examine occurrences of the Wanca Quechua directional suffix -*lpu*. The various senses parallel many of the same kinds of extensions observed for English above.

4. -*lpu* in Wanca Quechua

There are five meanings associated with-*lpu*: 1) 'downward motion of some object toward a point lower on a vertical axis', 2) 'termination of an action', 3) 'finally', 4) 'negative consequence', and 5) 'completely/totally'.

4.1. Spatial-directional down

Physical space is the primary domain of instantiation for -*lpu*. When attached to general motion-type verbs, as expected, it profiles downward motion along some relatively vertical extension:

(14) a. *cuti*- 'to return'
b. *cuti*-*lpu*- 'to return down [from up here]'

(15) a. *ahamu*- 'to come'
b. *śha*-*lpa*[9]-*mu*- 'to come [down to here]'

Neither *cuti*- nor *śhamu*- by themselves presume any verticality; that element is contributed wholly by -*lpu*.

Similarly (16).

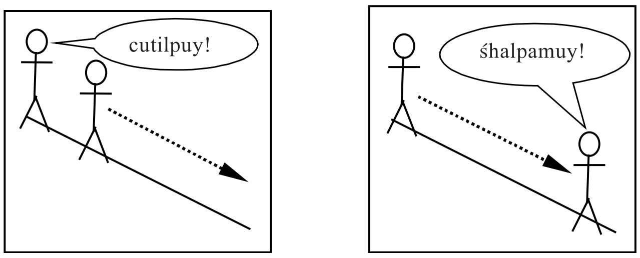


Figure 11. Return! and Come!

(16) a. *caćha-* ‘to send’ [motion away from body]

b. *caćha-lpu-* ‘to let down’ [motion away from body in downward direction]

c. *Jinal* *challwa* *chalacuyquita* *caćha-lpu-y.*
doing:thus fish your:nets send-DWN-IMP[10]
chalapäcunayquipa
so:you:can:catch
‘Doing so, let down your fishnets so that you can catch [fish].’

When *-lpu* is attached to roots which already inherently have a semantic element of “downwardness”, that aspect is curtailed or limited by the presence of the suffix:

(17) a. *bäja-* ‘descend’
b. *bäja-lpu-* ‘descend’

The difference between (a) and (b) is that *bäja-* implies a rather long descent, whereas *bäjalpu-* doesn’t. One would *bäja-* a hill, but *bäjalpu-* from the roof of a house to the ground. The same echoing of “downwardness” is seen in:

(18) a. *jita-* ‘to lose something (after putting it down)’
b. *jita-lpu-* ‘to drop something into a container’

4.2. Termination

Extensions of *-lpu* are found in the temporal-aspectual domain. Example (19) shows that, like in English *down*, *-lpu* can be used to focus on the termination of an event:

(19) *micu-lpu-*
eat-DWN
'to finish eating'

(19) with imperative morphology could be used felicitously, for example, to tell someone to stop eating because time is of the essence and he should be hurrying.

Similarly:

(20) a. *alu-lpu-*
throw:out-DWN
'to finish throwing out'

b. *Amcunañaćh chaycunaćhu cä malcacunäta lliw*
now:you:all in:those:places those:who:are towns all
*alu-**lpa**-päcu-nqui*
throw:out-DWN-PL-2
'You will finish throwing out all the people there in those towns.'

In this sense the endpoint of an event that has already been started is clearly in focus. This is represented in Figure 12, which illustrates the temporal analog of a spatial path. The designated event is located at the end of the temporal path, just as the trajector in the prototypical spatial configuration lies at the end of the conceptual path of scanning.

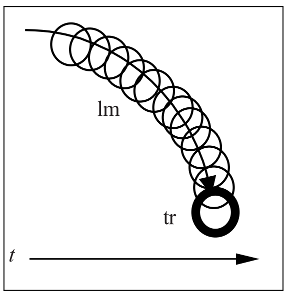


Figure 12. Termination

A comment on the nature of the path is appropriate at this point. Recall figure 5 of the balloon floating down. The path there consists of the totality of the distinct points that are occupied by the balloon at different times. Except for the matter of profiling, the end of the path does not

differ in "nature" or "substance" from the rest of the path as a whole; it is basically the "same kind of thing", all are stages of the "floating down" process.

I point this out in order to contrast this with the following use.

4.3. Finally

This one resembles the usage found in English 'pass down' mentioned above in that the *-lpu* suffix evokes the salient conceptualization of a time period preceding the overtly specified event. Consider the verb *yaycu-* 'to enter'.

As a verb profiling spatial motion along a path, we might expect the addition of the *-lpu* suffix to result in a prototypical sense of downward directionality. It is curious, however, that there is no such element that is implied in:

(21) *Quimsa punpïtam cay Jordan mayüta chimpaśhun,*
three days:hence this Jordan river we:will:cross
*Diosninchic umäśhanchic allpäman yaycu-**lpu**-napa*
our:God that:he:gave:us to:the:land enter-DWN-12PURP
'After three days we will cross this Jordan River, to finally enter into the land our God gave us. [Implicit: after the long period of wandering…]'

We find the same non-directional sense elsewhere:

(22) a. *lula-lpu-*
do-DWN
'do once and for all'

b. *Canan'ari śhun'uyquita tapucuy mayanninta*
Now:then your:heart ask:yourself which
*lula-**lpa-**:li-na-yqui-ta-si.*
do-DWN-PL-NOM-2P-ACC-INDEF
'Now decide [lit. as your hearts] what you are going to do once and for all [i. e. after an extended period of indecision].'

(23) *cushi-cu-lpu-*
be:happy-REF-DWN
'to finally rejoice [after having waited for the conclusion of something, for something else to have occurred]'

In each case the designated event follows a period of time that is given some measure of conceptual salience. 'Entering', 'doing', and 'rejoicing' take place after a period ends which has been characterized by some qualitatively distinct action. So, rather than the conceptual path being composed of earlier stages of the designated action, in (21)−(23) the path and the action appear to be more conceptually distinguishable. I have represented this in Figure 13.

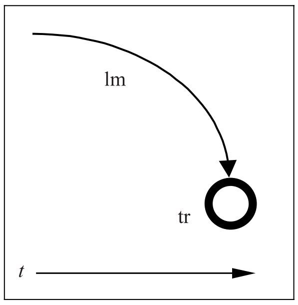


Figure 13. Finally

4.4. Negative consequence

A slightly different but related sense is suggested by the following:

(24) a. *lima-lpu-*
speak-DWN
'to go ahead and speak [with consequence]'

b. *Chay rabyaśhanchic üraćhu'a … chincacun lliw*
that when:we're:angry hour … loses:itself all
pinsayninchicmi; maquinchicmi cüricun; shiminchicmi
our:thinking our:hand runs our:mouth
*lima-**lpu**-n.*
speak-DWN-3
'When we get angry, we lose all our thoughts, our hands run [wild], our mouths speak [with injurious results].'

As with examples (21)−(23) above, the *-lpu* in (24 b) implies a preceding time period, which, in this case, is characterized by continuous frustration and a build up of circumstances such that the individual cannot hold his words back any longer. However, in addition there is the strongly sug-

gested element of negative consequence as a result of the action, specifically that of injuring another individual with words. So, unlike English 'to talk down to', which suggests condescension in a social domain, *limalpu-* appears to be more similar in meaning to 'to put someone down'.

Similar comments apply for:

(25) a *wa'a-lpu-*
cry-DWN
'to go ahead and cry [and see what happens]'

As with *limalpu-* the directional implies negative consequences which will follow as a result of the action, although in this case, those consequences may fall on the crier himself.

In these two examples the consequences are evoked as part of the semantic array even though they are completely implicit. The same sense of consequence is not present in (23).

It can be argued that this is an extension from the prototype in the following way: the horizontal surface of the earth is the implicit landmark toward which prototypical downward motion proceeds in the spatial domain and this corresponds to the implicit event toward which the designated event will lead. "Barrier" corresponds to "consequence" (cf. figure 14).[11]

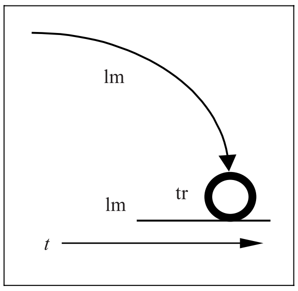


Figure 14. Negative consequence

4.5. Totally

The last use of *-lpu* that I will discuss is exemplified by following:

(26) a. *yaćha-lpu-*
know-DWN
'to determine for sure, confirm, verify'

b. *Paymi unay timpu śhamula caychica calupïtapis*
she long:ago time came great from:far:away:even
räsunpa yaćhayniyu caśhanta yaćha-lpu.
truly having:knowledge his:being know-DWN
'Long ago, she came from so far away to make sure [confirm, determine for sure] he really was wise.'

Sentence (26) highlights the very quality or essence of the designated event that it designates, and does so in a particular way. By the addition of *-lpu*, the action is presented as being extreme in quality or nature, as having reached its maximal fulfillment, such that a salient sense of totality or completeness obtains.

So in this example 'knowing' is conceptualized as being scalar, with *yaćhalpu-* pointing to 'knowing in its fullest degree'.

This is particularly clear when the directional is added to the verb for 'to walk':

(27) *puli-lpu-*
walk-DWN
'to trample, to walk on top of something with intent to destroy, finish it off'

It is not merely *walking* that is portrayed here, but walking of a deliberate and intense sort.

Consider:

(28) a. *läla-lpu-*
crack:open-DWN
'crack completely open'

b. *Chaynüta lulaptin'a aswa pu'ululmi lliw*
like:that if:he:does corn:drink when:it:matures all
läla-lpa-chi-n-man chay tunilcäta.
crack-DWN-CAUS-3-POT that pot
'If he does that, when the *aswa* ferments it will crack the pot wide open.'

Instead of a small crack in the pot producing only minimal damage, here, the suffix gives prominence to the extreme end of the quality scale.

Similarly consider:

29) a. *camaca-lpu*
finish-DWN
'finish completely'

b. *Lulaśha aśhta camaca-**lpu**-na-:-cama-m*
I:will:work until finish-DWN-NOM-1P-LIM-DIR
'I will work until I'm completely through.'

In each of these examples, the addition of the suffix construes the designated action as one that is pushed to its qualitative extreme. It seems then that this parallels the termination sense in that the path and its profiled endpoint are comprised of the same kind of substance. However, it is its qualitative analog. That is, its domain of instantiation is some kind of abstract "quality space" with the directional profiling the extreme end of a "quality path" (cf. figure 15).

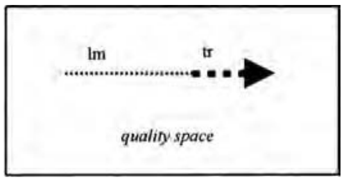


Figure 15. Totally

What emerges, then, is a category structured something like that in Figure 16. The spatial directional sense serves as the prototype (indicated by the boldface box) from which other meanings are extended. The blank boxes indicate potential intermediate schemas owing to interpretational ambiguities observed between certain forms; these will be discussed briefly in the following section.

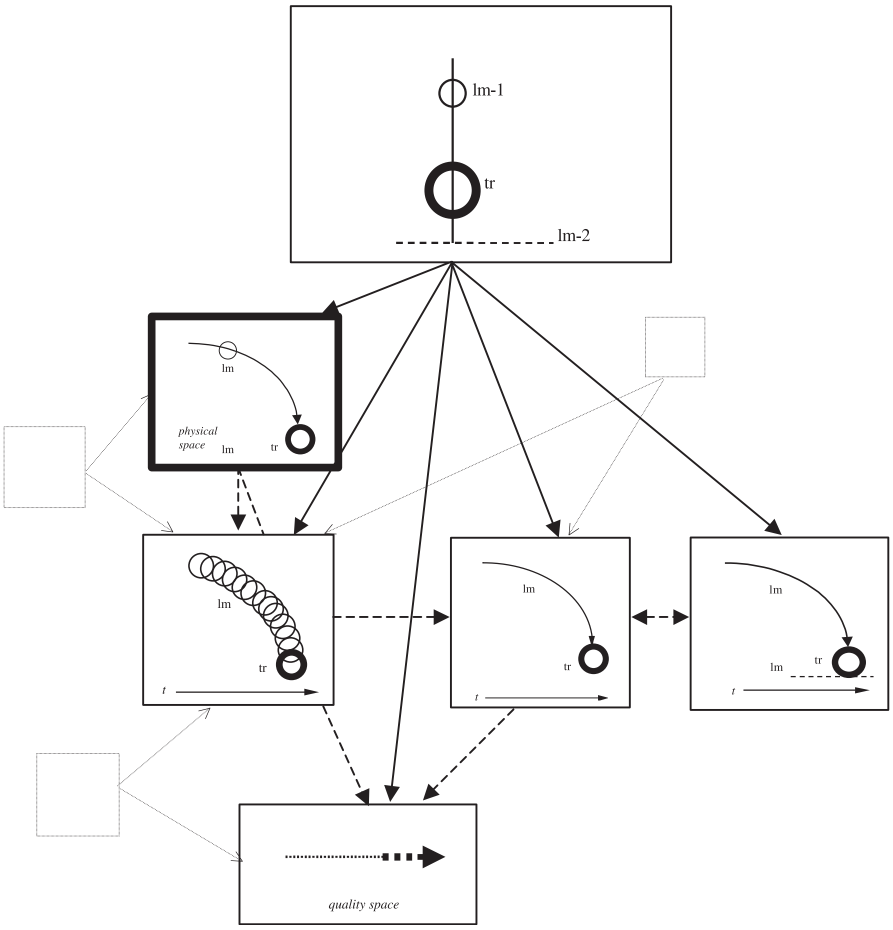


Figure 16. LPU

5. Ambiguities

Some of the Wanca forms are ambiguous between competing interpretations:

(30) *wañu-lpu-*
die-DWN
'to finally die (i.e. to go into a coma eg. after a long illness)' or
'to finish dying'

(31) *micu-lpu-*[12]
eat-DWN
'to finish eating' or 'eat all there is'

(32) a. *alu-lpu-*
throw:out-DWN
'to completely throw out' or 'to finish throwing out'

b. *Amcunañaćh chaycunaćhu cä malcacunäta*
now:you:all in:those:places those:who:are towns
lliw alu-lpa-päcu-nqui
all throw:out-DWN-PL-2
'You will completely throw out/finish throwing out all the people out of those towns there.'

The verb *lica-* 'to look' + *-lpu* is interpretable any of *three* ways: in its spatial directional sense, *licalpu-* could be used to tell someone to look down into a canyon at something. In its termination sense, it could be used to tell someone to quit looking at something. And in its 'totally' sense it could be used to tell someone to take a really good look at something instead of merely glancing at it.

(33) *lica-lpu-* 'look down from up above'
'to quit looking'
'to take a really good look'

Lindner (1981: 129) points out that this kind of thing is to be expected in a usage-based model; since speakers extract regularities from particular constructions, there is nothing to prevent the extraction of more than one pattern from a given set of forms. The result is that lexical items may be doubly, or even triply, categorized.

6. Parallels in other languages

It is interesting that portions of the semantic arrays associated with *down* in both English and Wanca can be found cross-linguistically. I include here data from Cora, Matsés, and Ashéninca.

6.1. Cora[13]

In the Cora language spoken in Mexico, the prototypical directional sense of the morpheme *ka-* 'down' is evidenced in (34):

(34) *yáa pú ká-ye'i-ri*
here.out 3SG down-go.SG-ABS
'From here, there is a path going downwards.'

In addition, there are at least two extensions parallelling those identified for Wanca. In (35) and (36), we observe an aspectual sense of 'termination':

(35) *pu'u-rí káa-ši'i ɨ́ taka'i-ra'an*
3.SG-now down-finish DEF.ART fruit-POSSR
'The fruit has already dropped off the tree.'

(36) *pu'u-rí ká-pʷa'ara-ka'a ɨ́ kʷi'ini-'ira'a*
3.SG-now down-end-RZD DEF.ART sick-ABSTR
'Now the illness has abated.'

And the sense of 'totality' or 'completely' (the extreme in terms of "quality space") can be appreciated in example (37):

(37) *ká-hu'uša'a mɨ́ čɨɨpili'i*
down-body.hair DEF.ART baby.chick
'The baby chicken is all covered with fuzz.'

6.2. Matsés

The 'down' morphemes for a number of languages show certain parallels with Wanca Quechua. For example, in Matsés, a Panoan language of the Peruvian Amazon[14], the root *-bud* is a verb stem meaning 'to move down from a higher to a lower position':

(38) *budobi*
down.PST.1
'I climbed down.'

But it also is a suffix which appears to mean something like 'to finish X-ing':

(39) *daëd ëquë dectambudcuenosh*
two at.the.side hang.DWN.motion.PST.3PL
'They finished hanging the two of them on each side …'

or 'to finally X' where an extended period of time is given conceptual salience:

(40) *Esus caimbudembi*
Jesus wait.DWN.FUT.1
'I will wait as long as necessary for Jesus.'

It also may mean 'completely' in the qualitative sense Wanca has:

(41) *uimabudec*
tire.DWN.is.he
'He is getting completely tired out.'

(42) *icsabudec*
bad.DWN.PROG
'It is going completely bad [in the sense of spoiling].'

-*bud* has also been extended to indicate that an action is done in a persuasive or imploring manner:

(43) *chuibudosh*
tell.DWN.PST.3PL
'They told them persuasively.'

In this case it might also be argued that the 'telling' was done in a 'complete' way.

6.3. Ashéninca

Ashéninca, an Arawakan language, also shows certain parallels to various aspects of the discussion above. According to Payne (1982: 325) "…the directionals quite often function in an idiomatic way similar to the post-verbal particles in English, such as *on* in *come on*, or *over* in *come over*…"

In her discussion of the 'allative' -*apa* Payne (1982: 326–327.) states "for motion verbs (like *walk, run, swim*), -*apa* carries the directional alla-

tive meaning of toward a certain point ... A more temporal meaning of -*apa* is seen when the suffix is attached to verbs of time or quantity. With them it means finality in the sense that the end of a sequence has been reached. It is also used with verbs such as arrive or overcome to indicate that a certain stretch of time has ended." For example, the verb *carataanȼhi* 'to comprise' is used to refer to something that is composed of more than one member. "With the addition of -*apa* the implication is that the last of the members which comprise the total has been reached." When used with the verb meaning 'to overcome' -*apa* adds a sense of 'finality' "implying that something the subject has been struggling with for quite a long while (like sleepiness) has finally overcome him."

The Ashéninca examples illustrate how the notions of a path and endpoint have been co-opted for use in various domains with meanings similar to those found in Wanca. The difference, of course, is that there is no spatial verticality associated with the -*apa* suffix.

6.4. Other languages

According to D. Tuggy (p.c.) in Nahuatl it is sometimes possible for suffixes to function as stems. If this is so, then there is a plausible connection between the Nahuatl locative -*tlam* 'down, at' and the verb *tlami* 'to finish, end'. This hypothesis is only strengthened in light of the semantic parallels with English *down* and Wanca -*lpu*.

Turkic languages[15] have so-called 'con-verbs' or 'aspectual verbs' which, when in conjunction with another verb, communicate verbal aspect. In Uzbek 'lie down' is incorporated as a 'habitual, or imperfective' marker. In Uyghur the verb 'settle down' is a con-verb conveying imperfective aspect, specifically "for a relatively brief period of time". And in Qazaq the word for 'foot' can be verbalized to mean 'let's stop'. Although not associated specifically with a lexical item meaning 'down', the extension between a lower extremity and the idea of termination is clear.

7. Conclusion

The primary focus of this study is to map out in some preliminary form the array of meanings associated with the directional suffix -*lpu* in Wanca Quechua. I have shown how its non-directional meanings can be accounted for as extensions from a clearly identifiable prototype, and that

such semantic extensions are by no means peculiar to Wanca. By doing so I have laid the foundation for more extensive examination of the other members of class of directional suffixes.

Notes

1. A version of this paper was presented at the SSILA meetings in Albuquerque July 1995.
2. The Wanca dialect of Quechua is spoken by some 250,000 people in and around the city of Huancayo in the central Andean highlands of Peru. In Parker's (1963) classification it is one of many central Peruvian dialects collectively known as Quechua B, or alternately as Quechua I (Torero 1964) or Central Peruvian (Landerman 1991). The data used here are representative of the Wanca dialect as it is spoken in the community of San Pedro de Pihuas, in the district of Cullhuas, province of Junín.
3. Wanca examples use a modified hispanic orthography with the following additions: dieresis indicates vowel length; ćh and śh are retroflexed versions of the alveopalatal affricate and sibilant; ' is a glottal stop.
4. The importance of this has been shown for Hawaiian in Cook (1996).
5. For many other languages, such as Atsugewi (Talmy 1985) and Cora (Casad & Langacker 1985, Casad 1993), the shape of the path is anything but trivial.
6. Which is, of course, different than *Turn the salesman down*.
7. Although not specifically auditory in nature, a parallel example where intensity as a quantity is then associated with verticality can be appreciated in *His fever's gone down*.
8. If we were to look for a "more direct" spatial-directional motivation, one possibility that suggests itself is the up-and-down motion of a lever correlating with changes in the loudness of the sound. The association is a bit more problematic if the television has a volume knob, whose movement is circular, lower volume being typically to the left. Spatial-directional motivation for this extension is equally non-transparent where a remote control is involved, since the same downward pressing action can either lower or raise the volume depending on which button gets pressed. In cases where remote volume control has a visual-spatial correlate on the screen, change in volume is typically indicated by movement along a *horizontally*-oriented scale instead of a vertical one.
9. The form of *-lpu* alternates with *-lpa* if it is followed by any one of a number of morphological "triggers", in this case *-päcu-*.
10. The following abbreviations are used: 1 'first person'; 12PURP '1st inclusive purpose'; 2 'second person'; 3 'third person'; ABS 'absolutive'; ABSTR 'abstract'; ACC 'aacusative'; CAUS 'causative'; DIR 'direct evidential'; DWN 'down';

FUT 'future'; IMP 'imperative'; INDEF 'indefinite'; LIM 'limitative'; NOM 'nominalizer'; PL 'plural'; POT 'potential'; PROG 'progressive'; PST 'past'; REF 'reflexive'; RZD 'realized'.

11. These are the only two examples of this I have run across so far. So whether or not this 'negative consequence' sense actually constitutes a fully conventionalized *distinct* meaning remains to be determined. I cite these primarily because of the prominence of the negative consequence that follows the designated action. I do find it interesting though that one bit of evidence from English corroborates the potential for this: in a number of recent movies some criminal type is heard to utter the phrase "something's going down here" to mean "something bad is about to happen".
12. This form alternates with *micalpu-*.
13. I am indebted to Gene Casad (p.c.) for the Cora data.
14. I am indebted to Harriet Fields (p.c.) for the Matsés data.
15. I am indebted to Ken Keyes (p.c.) for the information on Turkic languages.

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Speakers, context, and Cora conceptual metaphors

Eugene H. Casad

Introduction

English speakers have a variety of ways to express failures and making mistakes using metaphors such as *He bombed out, He goofed, He messed up royally, He muffed it, He shot himself in the foot* and *It went over like a lead balloon.* Focus on ways of failing is decidedly not confined to English, as the data given in this paper show. The Coras, speakers of a Southern Uto-Aztecan language of Northwest Mexico, have their own metaphorical expressions for talking about everyday goofs, shortcomings and failures and that is the topic of this paper.[1]

The data I discuss here consist of various morphologically related forms used conventionally by Cora speakers for describing the kinds of mistakes that people make. All these constructions invoke the verb stem *'ɨ¢ee*, which I gloss as "to pass beyond a conceptual reference point."[2] They differ in the selection of the specific locative prefix sequences that occur with the verb stem (cf. Casad 1997).

I continue here my exploration into the semantics of the Cora locative verbal prefix + verb stem constructional schema which I have discussed in a number of publications over the last two decades (Casad 1977, 1982, 1988, 1993, 1997 and 2001). In particular, in this paper I seek to meld into a single coherent analysis the complementary approaches of Ronald W. Langacker and George Lakoff (and their respective associates).

I draw on a panoply of concepts that have emerged from cognitive linguistics. I assume the validity of Lakoff's framework of Conceptual Metaphors, Idealized Cognitive Models and Image Schemas (1987; 1990), as well as that of Langacker's framework in its overall conceptualization and emphasis on the careful attendance to descriptive detail as a necessary precursor to explanatory adequacy (1987; 1990a, 1990c and 1999).

Crucial are the careful tracking of the context in which the respective instantiations are used, recounting of the native speaker's intuitions about the usages of these phrases, the detailing of a culturally relevant Cora prototype for describing mistakes (Palmer 1996), the role of abstract (or virtual) motion (Matsumoto 1996), the substantiation of the

speaker's specific conceptual reference points in distinct domains, the concomitant notion of mental spaces and the particular conceptual metaphor underlying each distinct usage.

I see the prototypical usage of this construction as instantiating a high level conceptual metaphor, whereas the specific usages reflect a set of lower level conceptual metaphors, specific to particular semantic domains (cf. Croft 1993). In other words, a field of related conceptual metaphors can be modeled as a schematic hierarchy like those associated with lexical items and grammatical constructions (Langacker 1987: 381, 409 .; 1990c: 118, 194), or, in Lakoff's terms, a radial category (Lakoff 1987: 67, 291). The results of this study thus converge with other recent research in the field (cf. Grady 1996).

This paper is organized as follows: I present each hypothesized conceptual metaphor a section at a time, as per its motivating.[3] I begin with the highest level conceptual metaphor, one that can be stated as TO ERR IS TO MISS THE MARK and then treat each specific one, substantiating in each case, the particular mark that is missed. I also lay out the Idealized Cognitive Models within both the strictly spatial domain that ultimately motivates the prototypical usage and those that motivate the particular domain specific instantiations. The prototypical usage is itself metaphorical and highly specialized, centered on the Civil-Religious Hierarchy which holds the traditional culture together (cf. Hinton 1961, 1964).

Following the discussion of the prototype (Section 1.), I discuss conceptual metaphors in the domains of physical activity (Section 2.), ground traffic (Section 3.), social and official functions (Section 4.), mental activity (Section 5.), the conversational interchange (Section 6.) and foreign travel (Section 7.).

1. The Schematic Prototype: TO ERR IS TO MISS THE MARK

The most frequently occuring use of *'iȼee* draws on the locative prefix sequence *a-uu-tá-* 'outside-that way-straight/across.' The normal use of this form is metaphorical, is based in the domain of mental perception and invokes a model that implies abstract motion. Example (1) is typical.

(1) *wápɨ'i nú ha-uu-tá- 'iȼee*
exceed I DIST-that:way-straight- pass:by
'I really made a big mistake.'

The form given in (1) has a specialized meaning of "to commit a ritual error." This version of the locative prefix + *'i¢ee* construction is schematic for several of the particular versions discussed later in this paper, i. e. (3 a), (14 a) and (16 b) and may well be the prototype for some of the both spatial and metaphorical usages. By extension, it is also commonly used to designate any kind of a mistake whatsoever. All such usages, moreover, are metaphorical and, as I hope to show, are based on a spatial model that encapsulates a Cora conceptual metaphor a là Lakoff. I begin by illustrating the relevant spatial usage of *a-uu-tá-* with stems other than *'i¢ee* in order to show explicitly the ICM on which the metaphorical usage is based.

Typical spatial usages of the locative prefix sequence *a-uu-tá-* are given in sentences (2) (a, b). (2 a) refers to a broken clay pot, whereas (2 b) describes the result of an injury to a person's knee.

(2) a. *a-uu-tá-tap^{w}a* *mɨ́* *ša'ari*
out-that-across-break ART pot
way
'The cooking pot is broken in half around the middle/from top to bottom.'

b. *a-uu-tá-haa* *ɨ́* *ru-tunuu¢e-'e*
out-that-across-swollen ART REFL-knee-on
way
'His knee is swollen all the way around.'

The use of *a-uu-tá-* in (2 a) indicates that the breakage extends all around the pot, cleanly separating it into two roughly equally sized parts, regardless of whether the pot is broken down the middle from top to bottom or is broken horizontally from side to side. In a similar fashion, the use of *a-uu-tá-* in (2 b) indicates that the swollenness at the joint of the speaker's knee extends all the way around the leg. The spatial model that relates these two usages of *a-uu-tá-* thus embodies a circular path conceived as going all the way around a discrete, bounded entity which is the primary reference point to which the *a-uu-tá-* relation is being anchored. A diagrammatic representation of this spatial model is given in Figure 1.

In Figure 1, a vertically oriented cylinder serves as the domain for defining *a-uu-ta-* and the morpheme *a-* 'outside' designates the external, visually accessible surface of the entity that serves as the basic domain. The morpheme *uu-* 'going that way' designates a directionally oriented virtual path leading away from a conceived starting point and the prefix

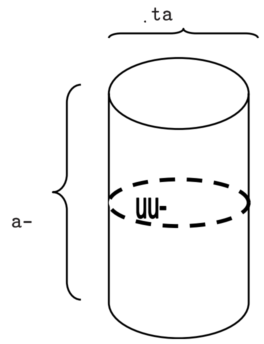


Figure 1. *a-uuta-* “going all the way around”

ta- ‘straight, across’ augments the path notion by placing salience on the totality of the extension of the path from its starting point to its ending point.

Turning now to the use of *a-uu-tá-* with the stem *'i¢ee*, we can state the case as follows: assuming that part of the meaning of *'i¢ee* implies the spatial or conceptual separation of an entity from a particular reference point, we can construe the usage of *a-uu-tá-* to imply abstract motion along a conceptual path that closes back upon itself within some abstract domain without ever making contact, physical or mental, with the conceptual reference point (Cf. Langacker 1990c: 122, 125, passim; 1999a, 1999b: 173–174, 179, 197; Matsumoto 1996, Talmy 1987). This is diagrammed in Figure 2. Later examples will clearly substantiate our assumption.

Figure 2 presents an image schema that constitutes the heart of the TO ERR IS TO MISS THE MARK conceptual metaphor within the domain of Cora civil-religious activities (cf. Casad 1997). The desired target is indicated as a large dot at the center of a circular closed curve. It is labelled as C-REF, i. e. the speaker’s Conceptual Reference Point. The virtual path is located along the perimeter of the closed curve and its directionality is indicated by the counter-clockwise oriented arrowheads. The fact that abstract, or virtual motion along a path is implied is indicated by the broken line nature of the trajectory (Langacker 1999b: 173, 205). The totality of the path’s extension is highlighted by the heavy bolding of the entire path. The notation S,G signals the overlapping of the starting and the end points of the path.

The relevant abstract domain is specified by the label “Civil-Religious Duties” at the bottom of the outer box, whereas the relevant temporal span of those duties is specified by the abbreviations for the 12 months

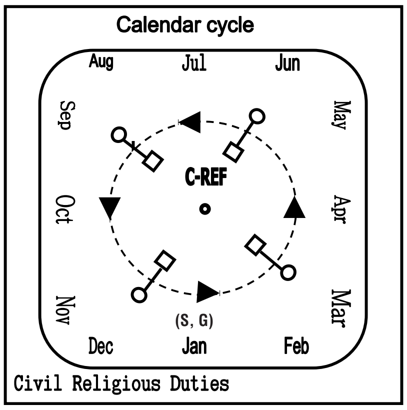


Figure 2. *a-uu-ta-'i¢ee* 'He failed ritually'.

of the year, arranged in counter-clockwise order and is identified by the label "calendar cycle" at the top of that same box, itself a second abstract domain. A schematic process which details the interactions between actors and entities within this domain is also represented in this diagram four times, signalling the continuity of the process throughout the entire calendar year. The small circle designates the responsible agent of the schematic process and the box connected to it by a straight line abbreviates the totality of the activities required for the particular role that the agent carries out.

The circular path aspect of the meaning of the Cora expression is reminiscent of our English expression *to beat all around the bush*, which means that someone talks on and on without ever coming to the point of what he/she was supposed to have said, i. e. without ever establishing mental contact with the appropriate conversational target. The overall meaning of Cora *a-uu-tá-'i¢ee* is quite different, however, and carries a different set of negative implications. The use of the form *a-uu-tá-'i¢ee* embodies the conceptual metaphor, TO ERR IS TO MISS THE MARK.

Turning to the specifics of "to err in the religious domain", within the Cora culture, missing the mark implies the failure to carry out all of your ritual responsibilities to the "T." This suggests the following conceptual metaphor: TO NOT DO EVERYTHING THAT DUTY REQUIRES IS TO MISS THE MARK IN CARRYING OUT YOUR RELIGIOUS DUTIES.

We need to also ask how an ICM incorporating a circular path can be motivated for this usage in this domain. The cultural information this draws on is the pattern that ritual offices are held for a year, consist of

varied duties to be carried out throughout the entire calender cycle of the year and are turned over to a new person each year, so that the long term exercise of the office calls on distinct persons to carry out essentially the identical set of duties year after year. This metaphorical connection of the spatial schema of encirclement to the social scenario of the ritual round shows the importance of cultural schemas in linguistic interpretation (Palmer 1996: 116, 132). The other possible principal that relates to this ICM is the commonly held construal that a single failure implies complete failure, i. e. if X is guilty at one point, he's guilty of violating the entire code, or a miss is as good as a mile.

2. Physical activity

Within the domain of physical activity, I consider two closely related situations, that of stepping over the edge of a cliff and that of stepping off the side of a plank lying horizontally on the ground.

2.1. Walking on a path

I have already postulated that the meaning of *'ɨ¢ee* includes reference to some entity that moves along a path and goes past a reference point located somewhere on that path. A wide variety of entities may serve as this reference point. For example, highly perceptible boundaries such as the edge of a cliff or the top edge of a wall are easily construable as the reference point beyond which an entity may move. This is illustrated in (3) (a, b).

(3) a. *n*^{y}*a-tɨ́'ɨh wa-má'a-kaa háih hap*^{w}*a, áh nú n-í*
I-CNJ EXT-go-IMPERF cliff-above CNJ I I-SEQ
an-ká-'ɨ¢ee
top-down-pass:by
'While I was walking along the top edge of the cliff I then accidentally stepped over the edge.'

b. *na-'an-ká-h-ve*
top-down-slope-fall
'I fell down the cliff.'

c. *a-uu-tá-'ɨ¢ee*
DIST-that:way-straight-pass:by
'He made a mistake.'

Sentence (3 a) shows the use of *an-ká-'i¢ee* context. In the "while" adverbial clause, the speaker explicitly mentions that he was walking along the top of the cliff. In the "then" clause, he mentions his accidently stepping over the edge. Example (3 b) illustrates an additional spatial usage in which the locative prefix sequence *an-ka-* 'on top-down' indicates physical motion through three dimensional space along a downward path. The downward motion from beyond this reference point is marked in Cora by the locative prefix sequence *an-ka-* 'on top-downwards.' In its directional usages, *an-ka-* anchors a path to its source point and gives that path a particular orientation. The path heads downwards and its source, marked by *an-*, is the extreme vertical point in the overall spatial setting (cf. Casad 1993: 620). This scenario is diagrammed in Figure 3.

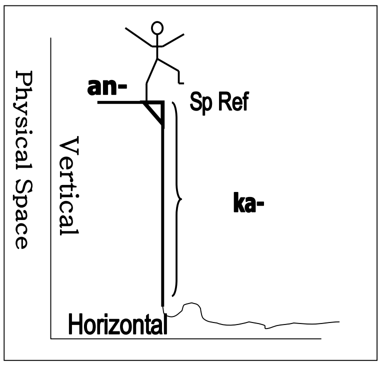


Figure 3. an-ka-i¢ee 'he stepped over the edge'

The domain of Figure 3 is "Physical Space", indicated by the label down the left side of the box. The orientation to the verticality scale is given by the labels "Vertical" and "Horizontal" at the respective sides of the right angle that frames the situation being described. The diagram presents a cross-section view of the activity and the terrain within which it develops. The prefix *an-* designates the basically horizontal pathway that the trajector follows along the top of the cliff, whereas the prefix *ka-* designates the total expanse of the vertically oriented wall of the cliff. This is indicated in the diagram by the vertically oriented curly bracket.

With (3 a), then, I begin to substantiate my hypothesis that the meaning of *-'i¢ee* includes reference to the physical separation of an entity from a spatial or conceptual reference point. In turn, (3 b), suggests that *an-ká-i¢ee* has as its functional equivalent *an-ká-h-ve* 'to fall down a verti-

cal expanse,' which also draws on the prefix sequence *an-ka-* and pairs it with the intransitive stem *-ve* 'to fall.' Finally, as (3 c) shows, the specific verb *an-ká-'i¢ee* can also be paraphrased by the more generic form *a-uu-tá-'i¢ee*, which I have already introduced. In short, the conceptual metaphor operative here is TO STEP OVER THE EDGE WHILE WALKING ON A PATH IS TO MISS THE MARK.

A second spatial usage involving physical motion is shown in (4). This usage draws on the locative prefix sequence *a-ii-ka-* 'outside-path-down' to indicate the downward movement of the subject obliquely across the border of a bounded area.

(4) *a'a¢ú nú a-ii-ká-'i¢ee*
some I out-path-down-pass:by
'I stepped obliquely off the side of the board.'

This usage of *a-ii-ka-* reinforces that of *an-ka-* in (3 a) in illustrating the motion of an entity across a boundary of a spatially delimited area or across and away from a spatial reference point.

In (4), the boundary is one edge of a plank laying flat on the ground. The speaker is walking along its primary horizontal axis and part of his foot goes off the edge of the board with the result that either his toes tend to point downward or his foot twists sideways. This situation is diagrammed pictorially in Figure 4. This usage further motivates my glossing of the verb stem *-'i¢ee* as 'to pass beyond a reference point.'

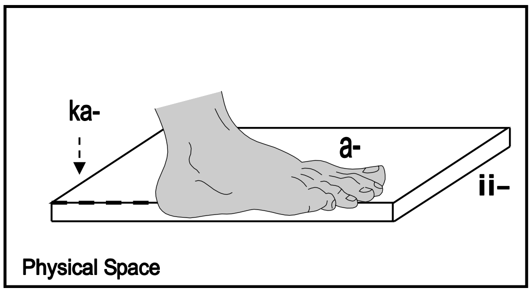


Figure 4. *a-ii-ka-i¢ee*: 'step off the edge of the plank'

In Figure 4, the domain is again Physical Space, with the base for *a-ii-ka-* consisting of a plank laid flat on the ground. The visually accessible upper surface of the plank with its clearly delimited edges comes under the scope of *a-* 'outside.' The prefix *ii-* designates the horizontal extension

of the upper edge of one of the vertical sides across which the speaker's foot is placed. In Figure 4 I have highlighted the linear extension of this edge by a broken heavy bold line. The vertical downward extension of that side of the plank is designated by the prefix *ka-*. In summary, both the usage of *an-ká-* in (3 a) and that of *a-ii-ká- in (4) are sanctioned by the conceptual metaphor,* TO STEP OVER THE EDGE WHILE WALKING ON A PATH IS TO MISS THE MARK, but each one reflects a distinct image schema.

3. Operating in ground traffic

Driving, for most of the Coras, is still a novelty. This state of affairs may be non-coincidentally related as to why the relative greatest variety of mistakes that I have recorded for a single domain relates to this one. These usages clearly establish the necessity of including both a conceptual reference point and an entity following a path that crosses the reference point as central aspects of an ICM for the verb stem *-'i¢ee*. The usages that I have noted to date include getting in the wrong lane, running off the road and missing your turn.

3.1. Getting in the wrong lane

Some of the Coras who have emigrated to the United States have recently started to drive cars. This has resulted in a number of spatial usages that I never heard while I was residing in Cora country. Example (5) presents our first version of crossing a reference point while driving a car. This came out when a Cora friend commented that he had gotten in the wrong lane while coming from a nearby point that was now behind him on the path he was following.

(5) *m-ú nú ha'-u-vá-'i¢ee*
MED-in I DIST-in-coming-pass:by
'I got in the wrong lane back there.'

In this spatial usage of *-'i¢ee*, the speaker grounds his reference point in the nearby location, drawing on the medial distance particle *mu*, in which the salient nearby location across the reference line is designated by *m-*, as seen in Figure 5.

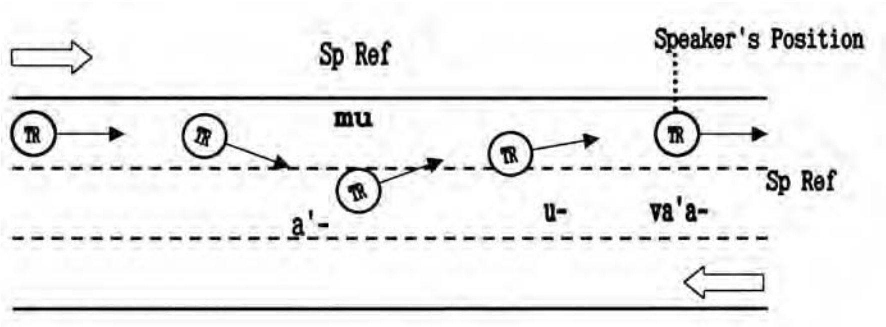


Figure 5. *a'-u-vá-'i¢ee* 'getting in the wrong lane'

The use of *-u* 'inside' with this example indicates that the location is behind the speaker (cf. Langacker 1990c: 48). This location is the anchor point of the path traced by the use of the locative prefix sequence *a'-u-vá'a-* 'DISTAL- inside-coming:this:way'. This prefix sequence, in conjunction with the verb stem *'-i¢ee* is understood to refer to the movement of the car into the wrong lane and then back into the proper one in the immediate stretch of the road that the driver has just traversed. Figure 5 presents all this diagrammatically. In this diagram the directionality of the lanes is indicated by the block arrows. The topmost lane was actually a right turn lane and the driver really needed to go straight ahead through the intersection. This suggests that the conceptual metaphor is: TO GET INTO THE WRONG LANE WHILE DRIVING IS TO MISS THE MARK.

3.2. Running off the road

Turning to example (6), in a strictly spatial sense, the locative prefix *ah-* in combination with a variety of morphemes, including *ta-* 'outside:slope-straight' and *ku-rá'a-* 'around-corner' designates vertically inclined expanses such as the side of a hill (6 a), a standing tree trunk (6 b), the bank of a river, or the side of a roadway or railway track.

(6) a.	*a-h-ku-rá'a-raa*	*áh-ka'i*	*ɨrí*	*hece*
	outside-slope-around-corner-go:PAST	across-over slope hill	hill	at

'He went off over the edge of the hill.'

b. *pá'arɨ'ɨ pú 'ah-tá-ve cɨyé heȼe*
child SUBJ slope-side-fall tree from
'A child fell out of the tree.'

In (6 a), the locative prefix *ah-* designates the declivity of the side slope of the hill, whereas the prefixes *ku-rá'a-* trace a path that goes horizontally across the slope on over to the backside of the hill, outside of the view of the speaker. Likewise, in (6 b), *ah-* indicates a side expanse, in this case, the vertically oriented convex surface of the trunk of the tree, whereas the prefix *ta-* 'across' designates the basically horizontal extension of the branch from its anchor point at the tree trunk.

As the gloss of (7) suggests, when *ah-ta-* combines with *'iȼee*, it conventionally refers to events such as a drunk driver running off the road, as illustrated by sentence (7).

(7) *m-á nú a-h-tá-'iȼee*
MED-out I out-slope-across-pass:by
'I ran off the road right there.'

Example (7) comes from testimony given by a Cora acquaintance charged with driving while under the influence of alcohol. The use of the locative particle *ma* 'right there' indicates that the speaker is pointing out a specific nearby, ordinarily visually accessible location. Here, the speaker was not actually on the scene of the infraccion, but was recounting the events as though he were. The boundary that he crossed was the edge of the pavement and the dislocation takes place at the particular point where his own path leading away from the fixed orientation of the roadway intersects with that edge of the pavement. All of these elements are graphed pictorially in Figure 6.

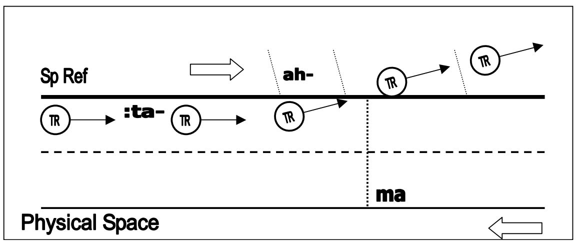


Figure 6. ah-tá-'iȼee 'running off the side of the road'

In sentence (7), the locative prefix sequence *a-h-ta-* 'outside-slope-straight' designates both the reference point and the path leading across and away from it in general terms. The prefix sequence *a-h-* 'outside-slope' generally designates the side slope of a hill. Here, it designates the typically downward sloping shoulder alongside a roadway. In Figure 6, this is indicated by the series of broken angled lines. The prefix *ta-* 'straight' designates the horizontal extension of a bounded area in one direction, i. e. the roadway itself. In this usage the boundary across which a driver may stray may be construed as an indefinitely extended line. A second conceptual metaphor in this domain as suggested by the above description is TO DRIVE OFF THE EDGE OF THE ROAD WHILE DRIVING IS TO MISS THE MARK.

3.3. Missing your turn

Sentences (8) (a–b) illustrate another strictly spatial usage of locatives with *'-i¢ee* involving physical motion.

(8) a. *pa-pu'urí* *y-u* *há'-'i¢ee*
you-nowhere- inside DIST-pass:by
'You just missed your turn.'

b. *y-ú* *nú* *há'-i¢ee*
here:inside I DIST:PASS:BY
'I missed my turn right back here.'

The use of the locative particle *y-u* in (8) (a, b) can be glossed in English as 'right back here' and indicates that the reference point, i. e. the turn-off, now lies just behind the speaker and addressee as they continue moving along in the wrong direction. The verb form itself carries only a single locative prefix, the DISTAL *a'-*. The use of this prefix points to the fact that the error was committed at a point in space and time that is clearly perceptually distinct from the point in space and time of the utterance. The difference between (8 a) and (8 b) is that in (8 b) the driver realizes his mistake, whereas in (8 a) his passenger points his mistake out to him, as mine did when I first heard this usage. This situation is represented diagrammatically in Figure 7.

The usage of *-'i¢ee* in this context clearly designates horizontal movement of an entity along a directed path, the existence of a particular reference point somewhere along that path, signalled jointly by *y-u* and

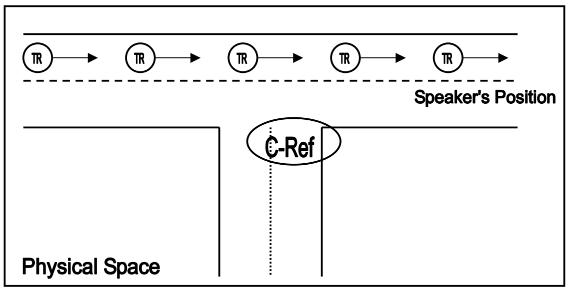


Figure 7. yu á'i¢ee 'He missed his turn'.

a'-, and continued movement of the entity along the path past the reference point, as indicated by the use of the verb stem *-'i¢ee*. The moving entity is a car, the path is a road and the reference point is the turn-off to a side road that intersects the main road along which the car is moving. The pieces of this whole scenario match very closely the model that I use to characterize what *-'i¢ee* means, as Figure 7 illustrates. In short, the third conceptual metaphor that we encounter in this domain, therefore can be stated as TO GO PAST YOUR TURNOFF WHILE DRIVING IS TO MISS THE MARK.

4. Attending social and official functions

Coras seem to have several different models of time that they draw on in making temporal extensions of spatial terms (cf. Casad 1993: 631 ff). The model appropriate to the present usage places a timeline in correspondence to the path predicated as part of the meaning of the stem *-'ɨ¢ee*.[4] The reference point of the physical model is then transferred to the temporal domain and the moving entity is characterized as continuing along the temporal path on past the temporal reference point. This is clear from the way that the Coras talk about a watch running ahead of time, as seen in example (9 a).

(9) a. *a-náa-yeih-šɨ* *í* *nʸa-reloh*
out-periphery-sit-PAST ART my-watch
'My watch is fast.'

b. *na-'a-ná-'i¢ee*
I-out-periphery-pass:by
'I got there late.'

The Cora expression views the indicator of the watch, typically the hour and minute hands, as seated at points along the directionally oriented time scale situated along the perimeter of the face of the watch, as illustrated in Figure 8.

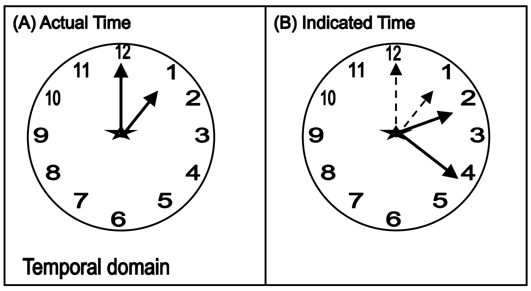


Figure 8. a-ná-yeihši 'My clock is fast.'

The speaker, on independent grounds, knows what the proper time is, knows what the canonical direction of the succession of time is and calculates the appropriateness, or lack thereof, of the time registered by his own timepiece as he looks at it. In our example, the speaker knows that his time piece is telling him that it is later than what it really is.

The same model of time as a natural directed sequence figures in the usage of *-'i¢ee* with the locative prefix sequence *a-na-* 'outside-periphery.' In (9 b), the moving entity consists of the speaker who is engaged in activity that is designed to get him to a specific place at a particular point in time. The use of this expression indicates that he did not arrive at his goal by the reference point in time, but rather that he went on past that temporal reference point before he got to his spatial goal. Figure 9 gives a pictorial representation of this situation.

The conceptual metaphor operative in this temporal domain can be stated as follows: TO NOT GET TO AN OFFICIAL/SOCIAL FUNCTION ON TIME IS TO MISS THE MARK

5. Mental activity

We now turn to the metaphorical usages of Cora *-'i¢ee* designating mental processes and I will try to show how each one relates to one or more spatial models via a mapping from one domain to another. The domain

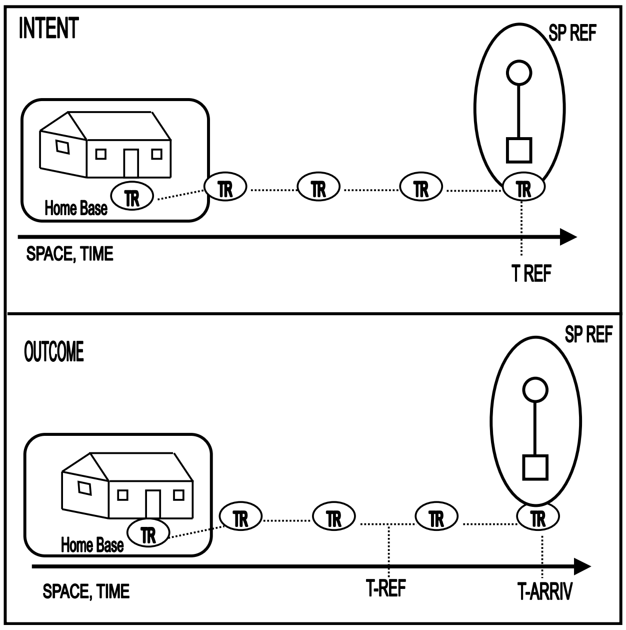


Figure 9. a-ná-'ɨ̨¢ee ‘He got there too late.’

in (10 a) is three-dimensional space. In contrast, (10 b) illustrates the use of the prefix sequence *a-ii-ká-* with *-ɨ́¢ee* to express a mental lapse.

(10)	a.	*pu'u-rí*	*a-ii-káa-me*	*mí*	*avioon*		
		SUBJ-now	out-path:to-down-go:SG	ART	airplane		

’The airplane is now coming in for a landing.’

b. *heíwa*	*nú*	*tí'i-seih-ra-*	*kaa,*	*aɨ́h*	*nú*	*kɨ́n*
lots	I	DISTR-see-TRNS-	IMPERF,	DEM	I	INSTR

a-ii-ká-'ɨ̨¢ee
outside-path-down-err
‘I was looking at a lot of things and that’s why I got distracted.’

The prefix sequence *a-ii-ká-* typically designates the movement of a discrete entity along a downward path coming toward the speaker’s location, as illustrated in (10 a). This sentence was spoken by a Cora sitting with me off to one side of the the airport runway in Tepic, Nayarit as we were watching a DC-3 coming back from its flight into the mountains of

Nayarit. The use of the deictic definite article *mɨ* indicates here that the airplane was in clear sight of the speaker. A pictorial representation of this situation is given in Figure 10.

In Figure 10, the domain is physical, three dimensional space, the perceived location of the airplane is designated by the the deictic medial

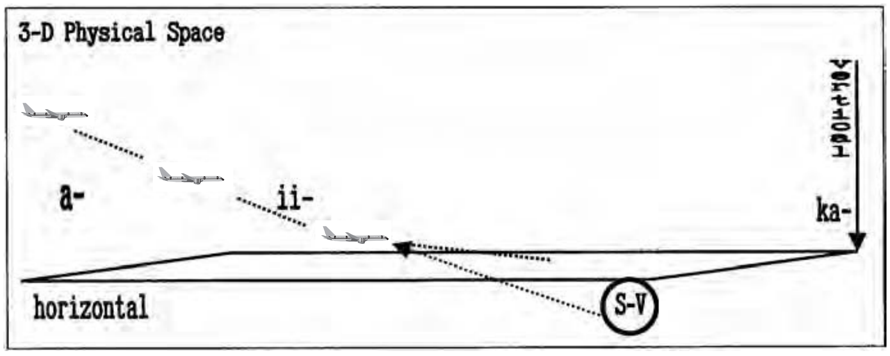


Figure 10. a-ii-káa-me mɨ avion 'The plane is coming in for a landing'

form of the definite article, i. e. *mɨ* and the locative prefix *a-* 'outside' indicates that the scope of the entire scene selected for comment is visually accessible to the speaker. The directionality of the descending path of the airplane towards the speaker's location is indicated by the locative prefix *ii-* and the total expanse of the downwardness of the directed path is signalled by the final locative prefix *-ka* 'down' and is calibrated against a verticality scale in Figure 10.

In the usage illustrated by (10 b), the spatial model of oblique motion across an appropriate boundary, illustrated earlier in (3 a), is applied to the domain of mental activity and perception. In particular, for some unknown reason, the speaker's attention gets pulled away from its mental contact on the proper object to focus on something else. It bases this on the spatial model of *a-ii-ka-* given in (10 a). In (10 b), this could well be the dazzling variety of goods in the store windows. In summary, we can hypothesize that TO GET DISTRACTED IS TO MISS THE MARK OF THE GOAL OF A MENTAL PROCESS, i. e. one drops his/her focus of attention from the proper object due to the attraction from some other entity.

The meaning of *a-ii-ká-'i¢ee* 'he got distracted', is depicted diagrammatically in Figure 11.

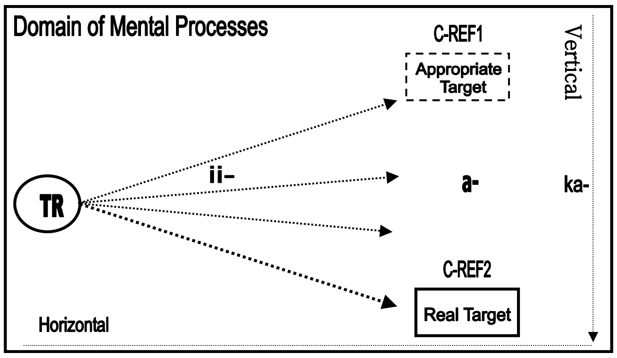


Figure 11. *a-ii-ká-'i¢ee* 'He/she got distracted.'

The appropriate target of the speaker's (= trajector) focus of attention is depicted by a box designated as C-REF1 and labelled as "Appropriate Target." The second box, designated C-REF2, is labelled "Real Target." The label C-REF, of course, means "conceptual reference point." The discrepancy between the two motivates the use of the verb *-'i¢ee*.

Given the shift of domain from 3-D space to the domain of Mental Processes, it is clear that there is no physical movement of a discrete entity along a downward path. Instead we must appeal to Langacker's concept of "virtual reality", which includes virtual (= fictive) entities, virtual paths and even virtual processes (cf. Langacker 1999, n. d.). In this case, the virtual path, scanned summarily, I would claim, is modelled on the downward path toward a conceived reference point. This is indicated in Figure 11 by the backgrounded verticality scale against which the trajector's shifting focus of attention is plotted via a series of dotted arrows that represent directed paths.

The reference point implied by the use of *a-ii-ká-'i¢ee* may well not be a physical location, but rather may be a conceptual point in time. The process of moving one's thoughts frrom one target to another is construed as following a sort of virtual path with its own natural sequencing and directionality, as seen earlier in our discussion of an off-time watch. The appropriate reference point, however, is not made explicit in (10 b). On the other hand, in example (11 a) below, a particular temporal reference point is stated.

Finally, just as was true of the relation of example (3 b) to (3 a), the generalized usage *a-uu-tà-'i¢ee* may be used as a paraphrase of this usage (11 b).

(11) a. *n-a-'i-ká-'i¢ee* *n^y-áɨhná kɨme'e n^ye-tí'i-seih*
I-out-path-down-pass:by I-DEM instr I- DISTR-see
-ra-kaa, *aɨh nú kɨn a-ná-'i¢ee* *n^yéh*
-TRNS-IMPERF DEM I INSTR out-periphery-pass:by I:SUBR
n-i kaí aún a-rá-'a *a'anáh tɨ p^wa'a*
I-SEQ NEG there out-face-arrive when SUPR SIMUL
out
ru-še'eva'a-kaa
REFL-want-IMPER
'I got distracted by the many things that I saw, thus I was late for my appointment, and I did not get there by the specified time.'

b. *a-uu-tá-'i¢ee*
DIST-that:way-straight-pass:by
'He made a mistake.'

6. In the conversational setting

English expressions such as *he really hit the nail on the head that time*, *he got right to the point* and *he's right on target* suggests that the content of speech is saliently viewed as a conceptual reference point across cultures. Cora certainly provides evidence for this.

Within the domain of the conversational setting, the locative prefix sequence, i. e. *a-ii-rá-* 'outside-path-facing out' is used metaphorically with *'i¢ee* to mean 'mispeak', as shown in (12 b). This usage involves a complex domain shift going from the spatial domain to the domain of social interactions. In order to account for this, I begin with a discussion of a strictly spatial usage of the prefix sequence *a-ii-rá-* paired with the stative verb *-n^yeeri-'i* 'to be illuminated'. This is illustrated by (12 a).

(12) a. *a-ii-rá-n^yeeri-'i*
outside-path-facing-illumine-STAT
'The light from the facade of the building/doorway is shining this way onto the outside.'

b. *ma-tɨ'ih m-aɨhná kɨn ti-n-aa-tá-iwau'u-*
they-CNJ they-DEM INSTR DISTR-me-COMPL-PERF-ask-
ri-'i *heíwa nú wápɨ'ɨ a-ii-rá-'i¢ee*
APPLIC-STAT lots I exceeding out-path-facing:out-err
'When they asked me about these things, I misspoke horribly.'

c. *a-uu-tá-'i¢ee*
DIST-that:way-straight-pass:by
'He made a mistake.'

The situation designated by (12 a) places an observer outside of, and in front of, a house at night. This is diagrammed pictorially from a bird's eye vantagepoint in Figure 12.

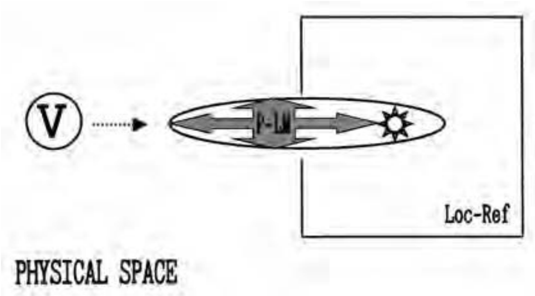


Figure 12. a-ii-ra-n^{y}eeri'i 'It is all lit up, coming this way from in the house.'

An area in front of the house heading in the direction of the speaker/observer is illuminated by a light that is either anchored to the front wall above the doorway or one that is inside the house with the front door being left open, allowing the the illumination to extend itself outward (cf. Casad 1995: 36–37). The expanse of the illuminated area is indicated by a four pointed arrow, filled with grey, bounded by an oval that is partly within the house, extends outward in front of the house and contains a representation of the light source at one end. The area itself is labeled P-LM, meaning 'perceptual landmark.' The house itseld is labelled Loc-Ref, meaning 'locational reference point.'

The metaphorical use of *a-ii-ra-'i¢ee* in (12 b) involves a domain shift going from the spatial domain to the domain of social interactions, and, more specifically, to the domain of the speech act, as indicated by the label for the outer box in Figure 13.

In (12 b), the conveyance of a speaker's message can be construed as an abstract entity traversing a virtual path from the speaker to the hearer, a kind of abstract motion with the point of origin being the speaker who is typically oriented facing his hearer or hearers. The discrepancy between the speaker's expectation of what the appropriate message should be and the hearer's response indicating that the actual message is a *faux pas* constitutes construal of the response as MISSING THE MARK.

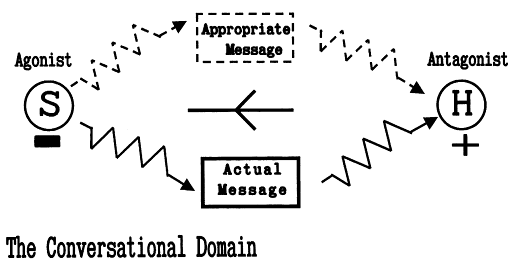


Figure 13. *a-ii-rá-'i¢ee* 'he/she mispoke to his/her own detriment'.

This orientation and the anchoring of the abstract motion to the speaker's location is what makes the use of the prefix *rá-* 'facing out' appropriate. The directionality of the abstract motion toward the hearer, who is also the entity gauging the propriety of the message being conveyed is what motivates the usage of the locative prefix *ii-* 'coming towards X.' The subsequent aural perceptibility of the spoken message, typically from a speaker who is also within eyeshot of the hearer, is what motivates the use of *a-* 'outside' in this example. This, then, is a version of virtual accessibility. Finally, the use of the stem *-a-uu-tá-'i¢ee* may be used as a paraphrase for this highly specific use also. To summarize, within the domain of the conversational setting, TO MISSPEAK TO YOUR OWN DETRIMENT IN THE COURSE OF CONVERSATION IS TO MISS THE MARK.

7. Foreign travel

I now turn to an example whose meaning was at first a decided puzzle to me. Sentence (13) draws on both the locative particle *m-u* 'there:specific-inside' and the locative prefix *a'-* 'off yonder'.

(13) *ní pa-kaí m-ú há'-i¢ee*
Q you-NEG MED-in DIST-pass:by
'Did it not go bad for you there off yonder?'

The use of the stem *-'i¢ee* in this sentence is sufficient to lead the hearer to infer that some negative result ensued. The use of both the deictic form of the locative particle and the distal locative prefix are sufficient to lead the hearer to infer that the negative result occurred at a location

quite remote spatially from the location of the immediate speech situation. The configurations given in the mental spaces of Figure 14 thus reflect a stative relation between the interlocutors at the speech event location and the virtual event at the deictic event location.

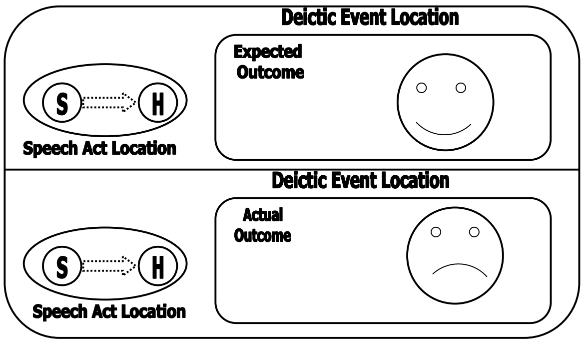


Figure 14. m-ú á'i¢ee 'to miss the mark there off yonder'

The deictic use of the medial *m-* form of the particle signals to the hearer that the speaker has a very specific point in mind, typically the last location mentioned by his/her interlocutor in the immediately preceding conversational interchange. In short, we can gloss sentence (13) as 'Did you not miss your mark off yonder?' In this case, the missed mark, or goal, that the speaker has in mind is that of his/her interlocutor having had a safe and pleasant time on a trip to a far away location, indicated in Figure 14 by a happy face in the upper mental space, wheras the actual result is signalled by the unhappy face in the lower mental space. This usage, of course, again reflects a conceptual metaphor, in this case TO NOT HAVE A GOOD, FUN AND SAFE TRIP IN TRAVEL FAR AWAY IS TO MISS THE MARK.

9. Conclusion

In this paper, I have examined a number of metaphorical usages of the Cora verb *-'i¢ee* in its combinations with distinct sequences of locative prefixes. These usages are seen to be motivated by a family of conceptual metaphors, the highest level of which is TO ERR IS TO MISS THE MARK. Each distinct locative prefix sequence plus *-'i¢ee* combination

conveys a distinct meaning or set of meanings and is motivated by a more specific conceptual metaphor that is domain specific. For example, within the domain of driving an automobile, I have discovered three specific conceptual metaphors: The first conceptual metaphor is: TO GET INTO THE WRONG LANE WHILE DRIVING IS TO MISS THE MARK, whereas the second one is TO DRIVE OFF THE EDGE OF THE ROAD WHILE DRIVING IS TO MISS THE MARK. As one might guess, the third specific conceptual metaphor can be stated as TO GO PAST YOUR TURNOFF WHILE DRIVING IS TO MISS THE MARK.

Each distinct morphological combination involving a locative prefix sequence with *-'i¢ee* reflects distinct spatial models and can only be understood in terms of a prior analysis of those spatial models themselves and the cultural schemas of Cora. Thus the prototypical usage, which can designate any kind of a mistake whatsoever, represents an extension from a very culturally specific usage which invokes a speaker's knowledge of the workings of the Cora ritual system throughout the calender year. This form is seen to extend to other domains and is found to serve as a functional equivalent for several other morphologically distinct forms that have more specialized metaphorical meanings. Thus *a-u-tá-i¢ee* can substitute for *an-ká-'i¢ee* 'he stepped off the edge of the cliff', as well as for *a-i-ká-i¢ee* 'he got distracted', among others.

In summary, Cognitive Linguistics provides us with a variegated and powerful set of descriptive devices, analytical strategies and explanatory means, as the account that I give of the Cora data in this paper suggests. Numerous factors enter into the analysis and they all must be given their due: the conceptual image schemas that lie behind the usages of the locative prefixes that enter into construction with *-'i¢ee*, the speaker's vantagepoint for describing the scene he/she has in mind (Langacker 1987: 123–6), the distinct mental spaces that provide the context for the metaphorical mappings, the domains relevant to the usage, (cf. Croft 1993), the choice of trajectors and landmarks, crucial to Langacker's approach, the utility of the speaker's ability to couch entities and interactions in 'fictive' terms (Langacker 1999; Matsumoto 1996 and Talmy 1986) and, finally, the role of both high level and specific low level Conceptual Metaphors (Grady 1996, 1998; Lakoff and Johnson 1980; Lakoff 1987; Lakoff 1990). Most generally, I have shown here that understanding the metaphors that Coras live by requires prior analysis of Cora spatial and cultural schemas. Thus, analytical approaches based solely on semantic features would be inadequate to account for these data.

Notes

1. I would like to thank the various Cora speakers who, over the years, have taught me to speak their language and provided me with all the examples given in this paper. I would also like to thank my co-editor Gary Palmer for his comments and suggestions that have improved this paper significantly.
2. The following abbreviations are used in the glosses of the morphemes that occur in the Cora examples in this paper: APPLIC: Applicative, ART: Definite Article, CNJ: Conjunction, COMPL: Completive, DEM: Demonstrative, DIST: Distal, DISTR: Distributive, EXT: Extensive, IMPERF: Imperfective, INSTR: Instrumental, MED: Medial, NEG: Negative, PERF: Perfective, Q: Question, REFL: Reflexive, SEQK: SEQUENTIAL, SG: Singular, SIMUL: Simultaneous, STAT: Stative, SUBJ: Subject, SUBR: Subordinator, TRNS: Transitive
3. The Cora conceptual metaphors as I state them in this paper are actually *translations* of Cora conceptual metaphors as they would be expressed in Cora. In an effort to render all this comprehensible to an English speaker, I present them as English translations.
4. The coincidence between the closed curve of the prototype and the one pertinent to this temporal usage may well be non-accidental and also multiply motivated.

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Reduplication in Nahuatl: Iconicities and paradoxes

David Tuggy

1. Introduction

Edward Sapir wrote:

> Nothing is more natural than the prevalence of reduplication, in other words, the repetition of all or part of the radical element. The process is generally employed, with self-evident symbolism, to indicate such concepts as distribution, plurality, repetition, customary activity, increase of size, added intensity, continuance. (1921: 79)

As Sapir emphasizes, reduplication is a highly natural phenomenon. Every language in the world probably uses some form or forms of phonological repetition to code semantic repetition and intensity. The reduplication of stems should be viewed against that background.

Nahuatl is an indigenous language family of Mexico, the 'Aztecan' of the Uto-Aztecan language stock. Reduplication is common throughout that stock (Langacker 1977: 128–130), but Nahuatl makes particularly conspicuous use of it.[1] It is a very complex and (depending on one's mood) either fascinating or frustrating phenomenon in the language. After nearly thirty years of involvement with different varieties of Nahuatl, I find that this is not a part of the language that I control with confidence.[2] For that very reason, it is one to which my thoughts return again and again.

In this paper we examine first the phonological side of reduplication, the ways in which stem reduplications are formed. These forms constitute a complex category, and the meanings they signal form an even more complex category. Most of these meanings are iconic to the nature of the phonological process in the ways that Sapir's dictum would lead us to expect. Some of these are more easily coded by one or another form of reduplication, but few of them are always and only coded by a single form of reduplication. For individual lexical items, the meaning of one form or another may be fixed and contrastive, or it may not. Not infre-

quently the meaning is so subtle as to be nearly impossible to detect. Besides the clearly iconic meanings there are a number of rather paradoxical meanings, in which the reduplication may signal goodness or badness, large size or small size, reality or pretense.

We will examine some of these patterns using Langacker's Cognitive grammar model (Langacker 1987, 1991).

2. Forms: the phonological pole

Reduplication is an intrinsically fascinating phenomenon for phonology. It falls between the lines of a number of categories often thought of as strict alternatives.

It is not a phonologically independent additive morpheme (like a 'normal' affix consisting of at least one syllable), yet it is not a prototypical process morpheme either. It is prefixal, yet its constituent phonemes cannot be specified as they are for a typical prefix. It consists of a full syllable, but, unlike the case with most full-syllable affixes, its basic segmental content is so phonologically empty as to be impossible to pronounce apart from a given context.

It is an excellent example of what Langacker (1987: 388–401) calls a 'complex phonological category'. It is tempting to call it a collection of morphemes, but that is not exactly right either.

2.1. The basic pattern: CV-CV

The basic pattern is that the first CV of a stem (i. e. the onset and nucleus of the stem's first syllable) are duplicated to occur before (to the left of) the stem.[3] Applying this pattern to the English word *rubbish* [r'əbɪš], for instance, would result in the form *ruh-rubbish* [rə-r'əbɪš], or applying it to *paper* [p'eypr] would result in *pay-paper* [pey-p'eypr]. A couple of examples from Tetelcingo Nahuatl (TN) are *tza-tzahtzi* 'shout (pl.), many people shout, there be shouting' (from *tzahtzi* 'shout'), and *nō-nōtza* 'chat with [s. o.]' (from *nōtza* 'call').[4]

This pattern is represented in Figure 1. a, and the two examples are listed there as elaborations of it. They are only representative examples: what I am positing is a bottom-up structure in which hundreds or even thousands of forms like *tzatzahtzi* and *nōnōtza* are established, and this is what prompts and justifies the schematic pattern 1. a. What I am emphatically not positing is that the rule is the only or perhaps even the

main structure that is established, and certainly not that the particular examples could not exist without it, as one would claim in a strongly 'generative' model.

2.2. Variations on the basic pattern

2.2.1. Contrasting vowel length

There are two variations on this basic pattern. One of them deals with the long-short contrast of Nahuatl. This contrast is a slippery one. It's definitely there in many dialects, but it's often below the thresholds phoneticians would set for contrastive use. People know it's there, but they often can't tell you where, have difficulty writing it, and read perfectly well when the orthography ignores it. Fortunately, there is one dialect, that of Tetelcingo, Morelos, where it has been converted into differences of phonetic placement, much as the historical long-short contrast of English was changed, so that it is now clearly audible.[5] It is for this reason that we use Tetelcingo examples in this section.

The pattern is to have the reduplicated vowel contrast in length with the stem vowel it corresponds to. Applying this pattern to *rubbish* in English would give something like *rue-rubbish* [ru-rəbɪš], and to *paper* would be *pappaper* [pæ-p'eypr]. Examples would include *tolontik* 'round', which reduplicates as *tō-tolon-tik* 'very round, all round', or *xīkowa* 'bear [s. t., e. g. a burden]', which reduplicates as *xi-xīkowa* 'outlast, beat [s. o.]'. The pattern is represented in Figure 1. b–d.

2.2.2. Syllable-final h

The second variation of the basic pattern is to close the reduplicative syllable with an *h*.[6] This, since long vowels do not easily go in syllables closed by *h*, generally means the reduplicated vowel will be short, whether or not the stem vowel was long. This pattern, represented in Figure 1.e, would produce for English *rubbish* something like [rəh-r'əbɪš] and for *paper* [pæh-p'eypr]. TN examples include *neki* 'want [s. t.], love [s. o.]' and *neh-neki* '(pl subject) want [s. t.], love [s. o.]', or *nōtza* 'call [s. o.]' and *noh-nōtza* '(groom's grandmother) formally ask [bride's father] for the bride'.

2.2.3. A schematic hierarchy for the reduplicative forms (phonological patterns)

These common forms of reduplication can, and under Cognitive grammar should, be represented in a schematic hierarchy of the sort in

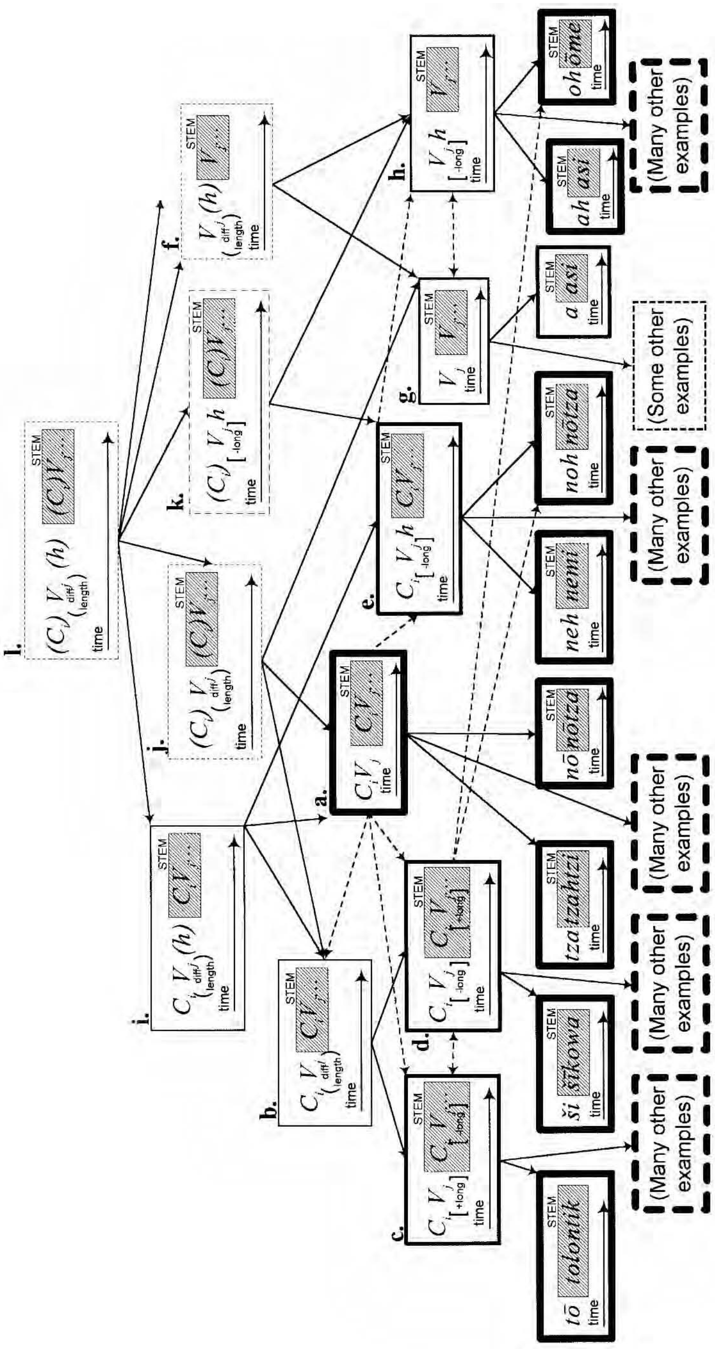


Figure 1. The Reduplication Construction (phonological pole, regular cases)

Figure 1, where the commonalities between the patterns are represented in schemas, directly demonstrating the relatedness of the structures to each other. The fact that these forms are common naturally means that the patterns for their formation will be highly *entrenched* and *salient* in Nahuatl speakers' minds; this is reflected in the diagram by the continuity and thickness of the boxes enclosing them. Many particular structures such as *tōtolontik* or *xixīkowa* are very well entrenched and are so marked; so too are such relatively low-level patterns as 1. e and especially 1. a. The boxes marked 'Many Other Examples' are both thick and non-continuous: I intend this to represent a range of entrenchment from highly salient forms to totally non-entrenched novel formations; cases of all degrees are included in the categories, characterized and *sanctioned* by the schematic pattern.

The occurrence of the novel formations is particularly important as evidence for the entrenchment of the sanctioning schemas. Note as well that in the case of 1. b the sub-patterns, 1. c–d, are represented as more salient than the more general pattern. Although other models would posit only 1. b, excising 1. c–d because of it, the CG model does not give us any reason to suppose that speakers' minds gravitate towards such higher level schemas as automatically as analysts' seem to; *ceteris paribus*, lower-level schemas are expected to be more salient. The schematicity relationship, which is represented by the solid-line arrows, means that the sub-cases are straightforward examples of the pattern in the schema, with no contradictions of its specifications. The dotted-line arrows, however, indicate partial schematicity, a relationship that involves distortions or contradictions of specifications. Such an arrow means I am positing that speakers do indeed perceive a similarity, and in fact see the target (the structure at the head of the arrow) as a deformed or altered case of the salient standard (the structure at the tail of the arrow). Thus Figure 1 includes the claims that 1. b–e (the different-length and -*h* patterns) are viewed as somewhat more complicated kinds of the basic 1. a, and that either 1. c or 1. d can be, and probably both are, viewed by speakers as a deviant form of the other.

2.2.4. Reduplication of vowel-initial stems

A less common, but still regular, form of reduplication is that in which the stem to be reduplicated is vowel-initial. In that case the reduplication will (naturally but not *a priori* predictably) lack its initial consonant. It can, apart from that detail, be of any of the other types mentioned above, with a vowel agreeing or disagreeing with the stem vowel in length, or

with an *h*. Thus, an English word like *eighty* ['eyti] could be reduplicated straightforwardly as [ey-'eyti], by vowel-length change as [æ-'eyti], or with *h* as [æh-'eyti]. The pattern with *h* is the most common here, presumably at least in part because it is much easier to hear than the basic pattern. Examples include the following: *asi* 'reach [s. t.], catch up to [s. o.]', *a-asi* '(pl subj) reach [s. t.], catch up to [s. o.], (sg/pl subj) keep catching up to [s. o.]', *asi* 'arrive'[7] *ah-asi* '(pl subj) arrive', *ōme* 'two', *oh-ōme* 'two by two, two each'. These patterns are represented in Figure 1. f−h.

The similarities among these schemas can themselves be expressed by schemas; these are presented in 1. i−l. The topmost schema, 1.l, would correspond to a morpho-phonological rule that would spell out the reduplicative morpheme as $(C_i)\ V_j$ [+/− long] (*h*) / ___ $[_{stem}\ (C_i)\ V_j$

2.2.5. Less common forms of reduplication

There are several less common forms which reduplication can take.

*2.2.5.1. Long-vowel-*h

Occasionally a long vowel does occur with the V*h*- pattern. This is exemplified by the form *mōtla* 'hurl [s. t.]' with its reduplicated form *mōh-mōtla* '(pl subj) hurl [s. t.]'. The pattern is represented in Figure 2. m−n, its marginality reflected in the discontinuity of the lines forming the box enclosing 2. m and by the arrows of partial schematicity going to the particular example *mōhmōƚla* (2.n) rather than to the pattern (2. m). (Note that Figure 2 is a continuation of Figure 1, separate only because not everything would fit conveniently on one page.)

2.2.5.2. Reduplication with epenthetic-initial stems

There is a process of epenthesis of *i* which in Nahuatl takes place before CC-initial stems when they are word-initial or post-consonantal. (Nahuatl does not allow tautosyllabic CC clusters.) When a stem like this would in its unreduplicated form have the *i*, that *i* gets reduplicated, either directly as *i-*, as the 'long' *ī-*, or as *ih-* (i. e. according to the patterns of 1. g or 1. h). However, in Orizaba Nawatl, where the stem follows a V-final prefix, and the *i* does not appear in the unreduplicated form, what gets reduplicated is the final vowel of the prefix. It is as if *deprogram* in English were reduplicated as *dee-ee-program* where *de-pro-program* would have been expected, or, more exactly, as if *deactivate* were pronounced *deektivate* and reduplicated as *dee-eektivate* instead of *de-ak-activate*.

Thus, the ON stem *tta* 'see' is pronounced *itta* in epenthesizing contexts (e. g. *nēch-i-tta* <u>*me-epenth-see*</u> 'he sees me'). This can reduplicate as *i-itta*, with the meaning 'examine [s. t.] closely' (e. g. *nēchiitta* 'he examines me closely') or *ih-itta* meaning 'look fixedly at [s. o., s. t.], judge [s. t.]'. The reflexive form of this verb stem is *mo-tta* 'be seen, look', which reduplicates as *mohotta* 'be repeatedly seen'. Note the ambiguity of whether to parse *mo-ho-* with an odd 'backwards' reduplication *-holo*,[8] or to parse *m-oh-o-* with the 'normal' reduplication *-oh* infixed to the prefix *mo-*, or to consider the second *o* as part of the stem, in effect positing a new reflexive stem *otta*.[9] Although it is not possible to go into the matter here, these patterns lead to ordering paradoxes and other complications under some traditional models of phonology which would derive the surface forms from invariant base forms, but the facts can be allowed to fall out naturally under the bottom-up CG analysis.

These patterns are represented in Figure 2. o–p.

2.2.5.3. Ambiguous stem boundaries

It is not always clear where the stem begins, i. e. what morphemes are non-stem prefixes and which may be counted as prefixal parts of the stem. It is as if English *discover* were sometimes reduplicated as *di-dis-cover* and sometimes as *dis-co-cover*. In the following examples from ON the unspecified object prefix *tla-* in one case is and in another isn't reduplicated. (The examples, which are all full words, also have the 3p sg object prefix *ki-*, the reflexive *mo-* and the plural subject suffix *-h*. The pattern needs at least this many elements in this case.) *Ki-mo-tla-mōchilia-h* means 'they throw it to each other'; it may reduplicate either as *ki-mo-tla-tla-mōchilia-h* or as *ki-mo-tla-moh-mōchilia-h*, with the meaning in either case being 'they throw it back and forth to each other'. Sometimes particular forms always reduplicate the same way, but the same morpheme in one case is and in another is not considered part of the stem. Thus the reflexive prefix *mo-* normally is added to the stem, as in the examples just given, but in a few cases is included as part of the stem to be reduplicated, e. g. (ON) *ma-m-ākia* 'often wear', where *m-ākia* is pretty transparently the reflexive form of *akia* 'put clothing on [s. o.]', and the expected form would be **m-a-akia*. This pattern is represented in Figure 1. q–r.[10]

Another kind of case is reduplication inside of a stem with a low degree of analyzability, where one might well not think of splitting the stem into a prefix + root, except for the fact that a reduplication comes between the two of them. This would somewhat be like reduplicating

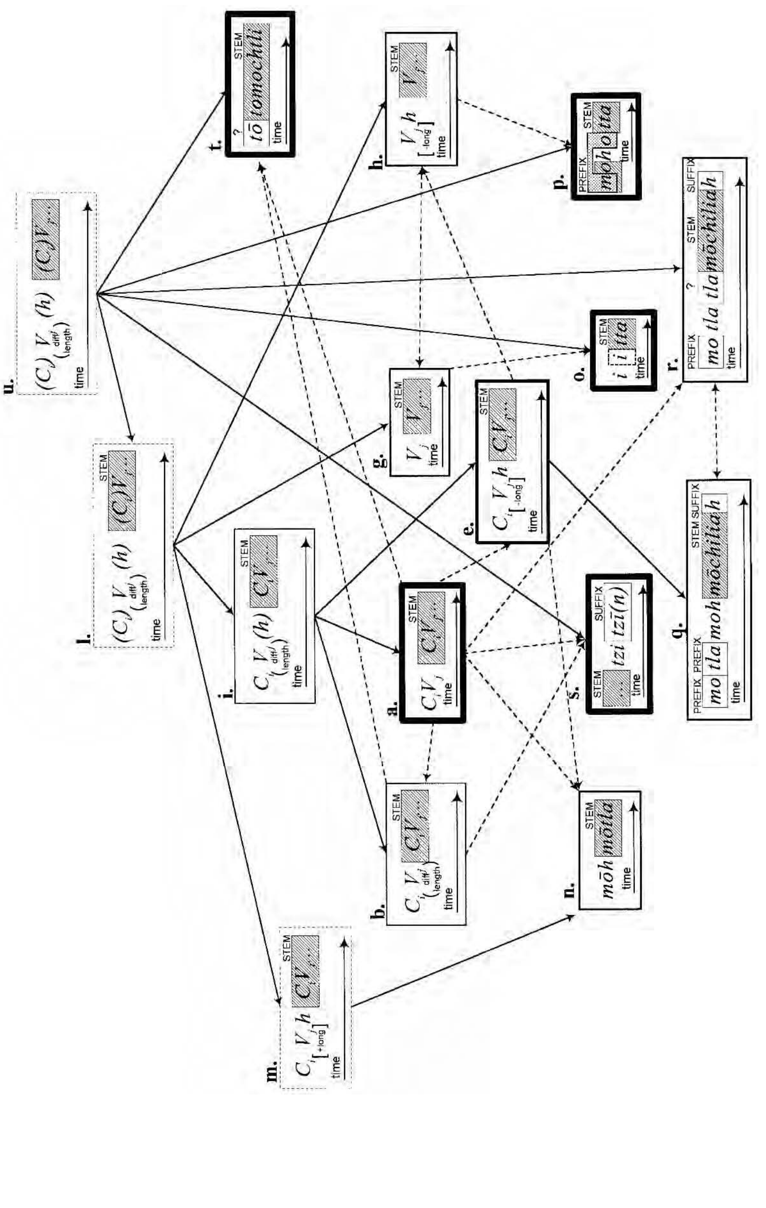


Figure 2. The Reduplication Construction (phonological pole, including less standard constructions)

defeat as *de-fee-feat*. The ON stem *tēlpōchtli* 'lad' reduplicates as *tēl-po-pōchtih* 'lads, boys'.[11] The morphemes *tēl* and *pōch* are not easy to identify, but the reduplication coming between them seems to indicate that the former is a prefix and the latter its stem.

Stemhood vs. affixality is of course not a purely phonological consideration, though under CG it has a strong phonological component. The ad-hoc markings of stem- or affix-hood in the diagrams may be taken as shorthand for sanction of the marked entities by the schemas defining stem- and affix-hood.[12]

2.2.5.4. Reduplication of suffixes

In a few specific cases reduplication regularly applies to a suffix rather than (or as well as) a stem. It is as if in English the word *doggy* were reduplicated not *daw-doggy* but *dog-ee-ee.* The diminutive/honorific suffix -*tzī(n)* reduplicates in this way. For instance the obligatorily possessed TN stem *kak*[13] '[s. o.'s] sandal' can take this suffix to form *kak-tzī*, which means '[honored person's] sandal' To pluralize possessed nouns the suffix -*wā* is added, but -*tzī* if present must also be reduplicated; thus *kak-tzi-tzī-wā* is the stem meaning '[honored person's] sandals'. This pattern is represented diagrammatically in Figure 1.s.; it is very highly productive, as it is the normal way to mark possession by an honored person on any possessible noun or.[14]

2.2.5.5. Etc.

Other oddities come to light from time to time in different variants of Nahuatl. As one example, in certain stems in Orizaba Nawatl a long *ē* tends to be pronounced [^{i}*e*], and reduplication of that vowel may be with *i* instead of the expected *e*, e. g. *ki-kēch* [kɪk^{i}eč] (rdp-how.much) 'how much are they apiece?'. This 'phonetic reduplication' is in some ways reminiscent of the 'wrong-vowel' reduplication of Figure 2. p. Similarly in the Nahuatl of Ameyaltepec, Guerrero (Amith and Çanger 1999) the historical root *mawi* 'fear' is now pronounced *muwi* and is sometimes reduplicated with *ma-* (e. g. *ma-muh-tia* rdp-fear-caus) and sometimes with *mu-* (e. g. *mu-muwi* rdp-fear). The Tetelcingo adjective *wēyi* reduplicates as *weh-weyi*; instead of the vowel in the reduplication varying in length (2.2.1), the stem vowel varies, so that the two vowels match (like the basic pattern of 2.1) rather than differing.

In other words, this list of complexities in the phonological patterns of reduplication is only representative; it cannot pretend to be exhaustive, especially when all the Nahuatl dialects are taken into consideration.

2.2.6. Summary and discussion

To sum up, there are a number of related phonologically reduplicative patterns, some of which are common and well-established and others of which are relatively peripheral. The patterns constitute schemas embodying the similarities of particular forms, and the similarities which constitute the relationships between patterns can also be expressed as schemas. These schemas naturally constitute a schematic hierarchy. This hierarchy, I would claim, is a natural category of Nahuatl phonological structures which constitutes the phonological pole of the reduplication morpheme or complex of morphemes.

It is a question well worth asking, to what extent all the schemas, especially the upper-level schemas (highest-level generalizations) correspond to anything in Nahuatl speakers' minds. I don't have any clear arguments to prove the degrees of salience I posit here, but I would judge that the schemas which I have put in broken-line boxes may be non-salient to the point of non-existence in many speakers' minds, whereas those in solid-line boxes are probably well-entrenched. For most if not all of them I could produce evidence of productive use of the pattern, for instance. Where the existence of the schemas may not be sustainable, there is probably still a connection of some sort, indicated by the dotted arrow of partial schematicity or extension. Otherwise one would be positing that speakers are not aware that the different kinds of reduplication are related to each other, a supposition that seems highly dubious to me, especially given their linkage at the semantic pole.

Note that the topmost schema, 2. u, which under traditional models of phonology would be the most desirable one, is under this model dispensable and likely to be non-salient or even non-existent in speakers' minds.

3. Meanings: the semantic pole

The phonological pole is complex; the semantic pole is even more so. Part of the complexity is that there are simply more patterns. Another part is that the phonological patterns tend to be privative: if you have

one you do not have its neighbor. At the semantic pole, however, it is usual to find cases where two or three meanings are present and intermingled in differing degrees. They may range in strength down to the point of being negligible, so that the reduplicated and non-reduplicated meanings are virtually indistinguishable from each other, and when combined with particular stems and particular specific contexts the spectrum of particular meanings is vast.

The meanings tend strongly to be iconic, with semantic replications of one sort or another corresponding to the phonological replications. We will skim over some of the patterns here in Section 3, and look at a few examples in context in Section 4.

3.1. Semantic replication

Replication of a semantic pattern is of course iconic to the replication of the syllable onset-and-nucleus which characterizes the phonological pole. There are several types of replication which it may be helpful to distinguish, though in particular cases it is not always easy or helpful to make a distinction.

3.1.1. Repetitive

The notion of repetitivity is that of replications of a process or static configuration through time. (The word 'repetition' is sometimes used for other kinds of replication, but we will use it in this paper only to denote repetitivity in this technical sense.) It is probably the most common meaning of reduplications on verb stems in Orizaba Nawatl at least. (In Tetelcingo usage to denote plurality rivals or perhaps exceeds it.)

For instance, in the form *owalmimixkiawik*, taken at random from text,[15] the verb stem *mix-kiawi* (<u>*cloud-rain*</u>) 'mist, drizzle' is reduplicated. With the prefix *wal-* 'up and do it, suddenly/disconcertingly do it' and preterite tense affixes *o-* and *-k*, you get a meaning more or less like 'it started drizzling and drizzling'. The idea is of the weather misting or drizzling day after day for some time. If the reduplication were not present, the form would be *owalmixkiawik*, and would mean 'it started to drizzle'. As another example, the stem *ihtowa* means 'say [s. t.]'; the reduplicated form *i-ihtowa* means 'say [s. t.] over and over'. *Witeki* means 'thump [s. t.], strike [s. t.]', and *wi-witeki* means 'beat [s. t.], hit [s. t.] over and over again'.

This meaning is represented in Figure 3.a. It seems to be most strongly connected to the 'standard' reduplication pattern of 1.a, but occurs with the 'different-length' reduplication (1.b) as well, e.g. *kuā-kualāni* (rdp-get.angry) 'get angry over and over again'.

In Figures 3 and 4 I do not represent the specific forms but only the patterns that they represent. This is only because of space limitations, however. My claim is that to the extent that these specific meanings (e.g. 'get angry over and over again') are established or entrenched in their own right (and many are very well established indeed, as discussed in 3.7, 3.8.1), they also should be included in order to present a complete picture. As in the phonological structures of Figures 1 and 2, the picture is a "bottom-up" one, with the patterns resting on the specific examples as much as the specific examples are sanctioned by the patterns.

As with other meanings discussed later, this meaning is often combined with other semantic pieces in ways which may be lexicalized to specific forms. For instance, *ki-kiawi*, a reduplicated form of *kiawi* 'rain', means 'rain and rain', but is a usual form for designating the rainy season coming in. Thus, for instance, *yopeh kikiawi* (it.already.began it.rains.and.rains) will mean, unless context denies it, 'the rainy season has begun'. *Kochi* means 'sleep'; *kō-kochi* means 'nod off' which is probably repetitive but likely also involves the 'not quite' meaning (3.4) as well.

A specialization of the repetitive notion which is quite common is that of customary activity. Thus *kowa* means 'buy [s.t.]', and *kō-kowa* means 'customarily, usually, often buy [s.t.]', *ya(wi)* means 'go' and *ya-ya(wi)* 'always go, customarily go', and so forth.

3.1.1.1. Separated repetitions

When the idea of repetition is used with the '-*h* reduplication' pattern of 1.e, there is some tendency for it to mean 'at separated intervals', 'from time to time'. This is iconic to the interruption of the voiced airstream by the -*h*, and so is a natural meaning. Thus *o-ki-moh-mōtla-keh ika tetl* (past-him-rdp-throw.at-pret.pl with.it stone) contrasts with *okimōmōtlakeh ika tetl* in that the former means something like 'they threw stones at him (at intervals)' whereas the latter means 'they stoned him, pelted him with stones'. Similarly, *witeki* means 'strike [s.t.]', and *wi-witeki* 'knock on [s.t.] (e.g. a door)', but *wih-witeki* means 'knock on [s.t.] with deliberation, with separate blows'.

Nonetheless, the idea of separated repetitions is very frequently coded by the 'standard' or different-length vowel reduplication patterns, and seems to be simply a modification of the idea of repetition. For instance,

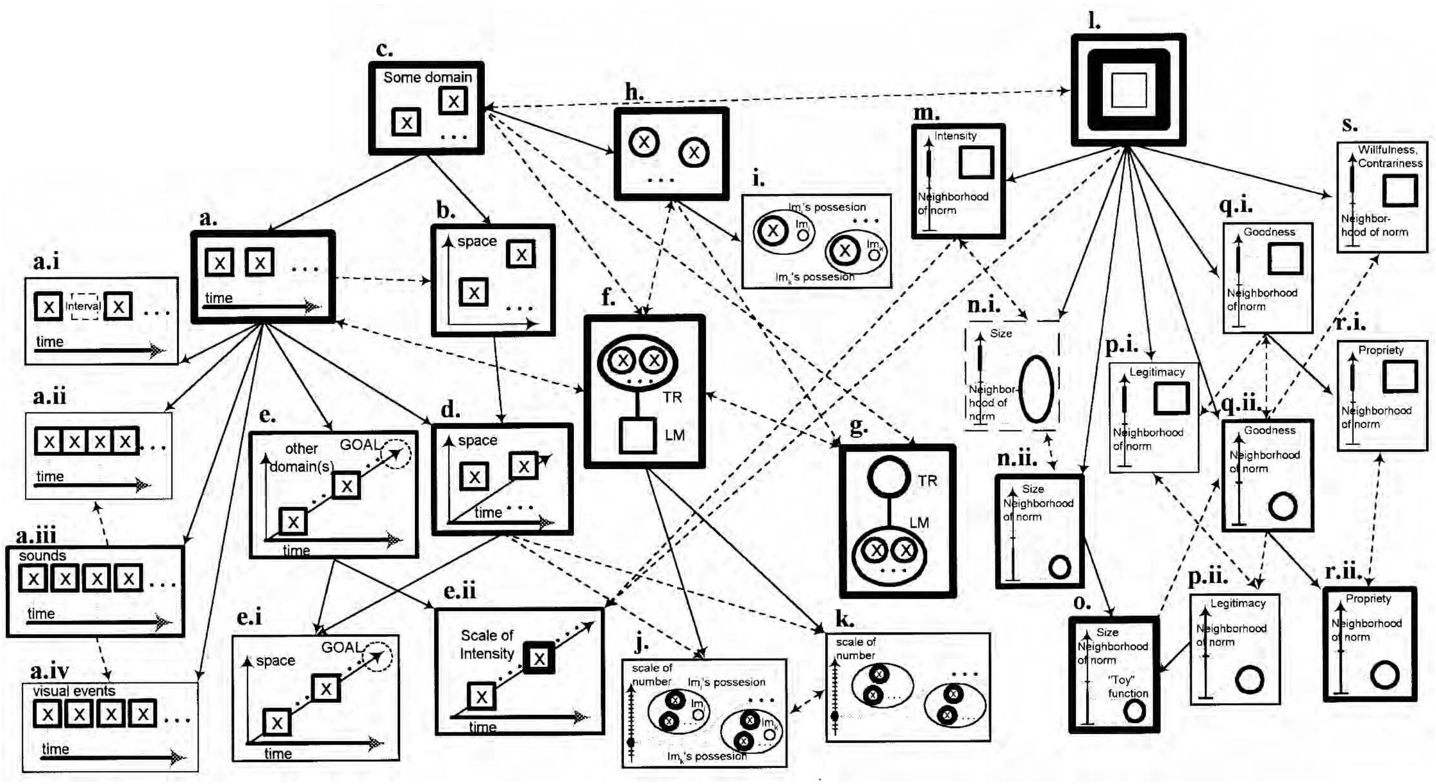


Figure 3. The Reduplication Construction (semantic pole)

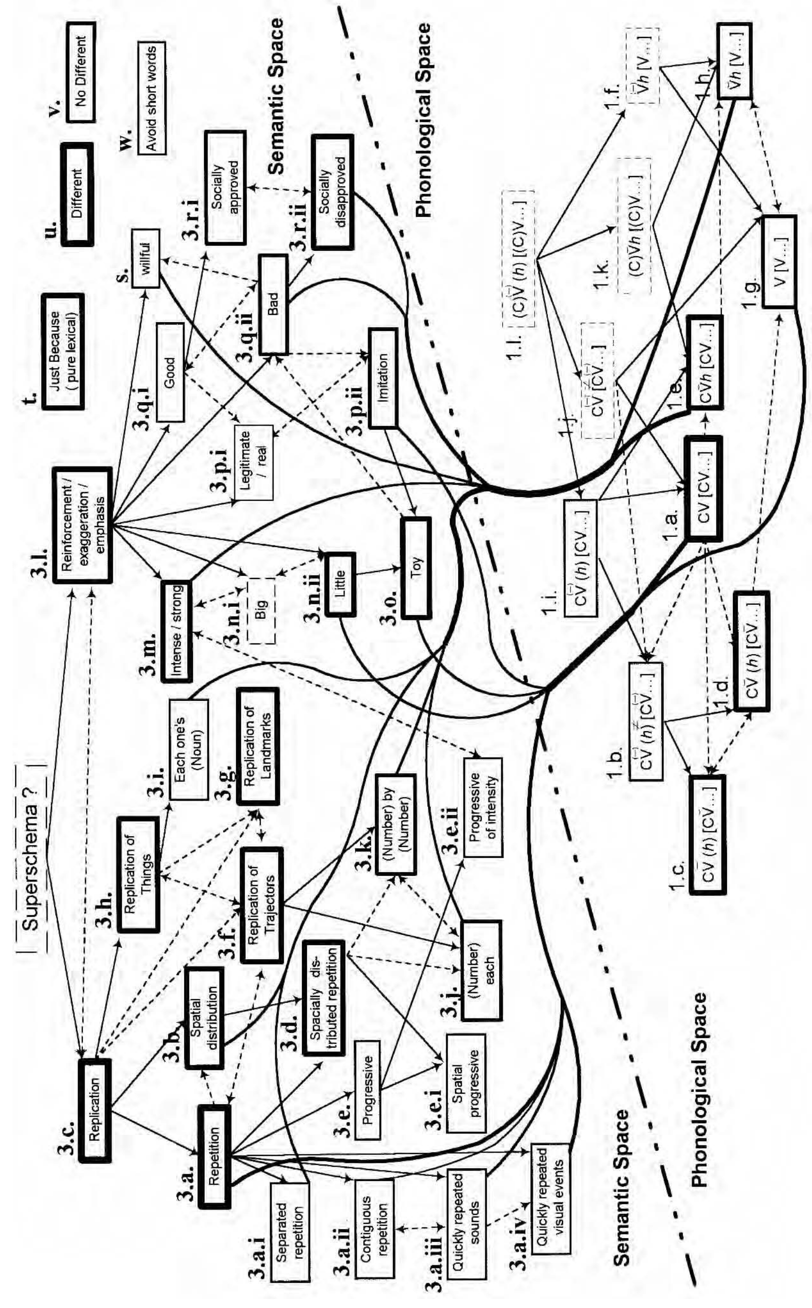


Figure 4. The Reduplication Construction

maka means 'give to [s. o.]', while *mā-maka* means 'occasionally give to [s. o.]'.

It is represented in 3. a. i.

3.1.1.2. Continual action

As repetitions are less and less separated, they can come to follow one another so closely that there is practically no break between them, and the meaning approaches the idea of 'constantly, continuously'. For example *tzi-tzili-ka* means 'ring (e. g. telephone, alarm clock)' and refers to a buzzing or trilling sort of ring as opposed to a punctuated one. Another nuance that shows up in some cases is that of customary activity; an example we have seen is *kuā-kualāni* which besides meaning 'get angry over and over again' is likely to mean 'keep getting mad, always get mad,' or even 'be an angry person'. A summary schema for these ideas is represented in 3. a. ii.

Continuity is not a primary meaning of the reduplicative morpheme(s), however, probably because there are durative or other continuative aspectual suffixes (*-tika* in Tetelcingo, *-to(k)* in Orizaba, both meaning 'durative'; *-tinemi* meaning 'go around Verbing', *-ti(wih)* meaning 'Verb as you go', and so forth) which are the usual ways to code that meaning. Also the present and imperfect tenses, which are extremely common, naturally receive a continuative (or repetitive) meaning. Nevertheless, it is not terribly unusual to find a verb in present or imperfect tense, with both reduplication and a continuative aspectual suffix, which can code an emphatic continuity or repetitivity of the designated process. E.g. *chi-chipīn-to-k* (<u>rdp-drip-dur-pres</u>) 'it keeps on constantly drizzling/dripping'.[16]

3.1.1.3. A special case: repeated noises (etc.)

There are a large number of verb 'stubs' or roots which cannot be used alone, but which tend to mean 'make a noise (of some kind)'. These 'stubs' take a *-ni* suffix (usually lengthening the final vowel) to mean 'make the noise once in a big way'. They can also be reduplicated (according to the basic CV- pattern) and take a *-ka* suffix to mean 'make the noise many little times'.[17] E. g. *tzili-* means making a metallic ringing noise, so *tzilī-ni* means '(it) ring (e. g. a church bell)', and, as we have already seen, *tzi-tzili-ka* means '(it) ring (e. g. a telephone bell or alarm clock)'. Some cases deal not with sounds but with visual events; e. g. *petla-* means 'flash', so *petlā-ni* means 'flash (e. g. lightning)', and *pe-petla-ka* means 'sparkle' or 'twinkle (as a star)'.

In all these cases the reduplication is required for use with the *-ka* suffix, but it clearly corresponds to the idea of many quick repetitions; the lack of the reduplication in the *-ni* forms corresponds to the lack of such repetitions.[18] The meaning of these forms is represented in 3.a.iii and 3. a. iv.

3.1.2. Distributive

The notion of distributivity relates to a process or static configuration which is distributed through space rather than time. This meaning often occurs on verbs, but is also common on adjectives (many of which are deverbal). An example of it would be *koh-koyōni*, where *koyōni* means 'be perforated' but the reduplicated form means 'be perforated in several places/all over' and the derived adjectives *koyōn-tik* and *koh-koyōn-tik* mean, respectively, 'perforated' and 'perforated in several places, peppered with little holes'. Similarly *chikoyawi* means 'be crooked (e. g. a fence)', and *chih-chikoyawi* 'be crooked in several places', *ihtlakowa* means 'break [s. t.] up, ruin [s. t.]', and *ih-ihtlakowa* means 'break [s. t.] into separate pieces, take [s. t.] to pieces'. *Ixkoyan* means 'alone', whereas *ih-ixkoyan* means 'separate (from each other), divorced.' *Kotōnilia* means 'break / tear into pieces for [s. o.]'; *mo-kō-kotōnilia* (with the reflexive *mo-* and a plural subject) means 'split (a parcel of land) into separate plots for each'.

This spatially distributive meaning is represented in 3. b. Both 3. b and 3. a are placed beneath a schema (3. c) that simply specifies replication without specifying what domains the replication takes place in.

The above examples reflect the pattern of the spatially distributive notion showing a special affinity for the '-*h* reduplication' pattern, but it is by no means limited to it. E.g. *pa-paktik* means 'rough, dry, scratchy", while *pah-paktik* has the distributive meaning 'rough, dry, scratchy in patches'. But on the other hand *nē-nemi* has the distributive meaning 'walk hither and yon' as opposed to *neh-nemi*, which simply means 'walk, stroll'.

3.1.3. Repetitive distribution

The time and spatial dimensions are very commonly coordinated to produce hybrid meanings. The stem *koh-koyōni*, which we discussed a moment ago, is typically used where it can mean 'be perforated sequentially (through time) in several places', and *nē-nemi* 'walk hither and yon', when performed by a single trajector (subject), necessarily involves the trajec-

tor's walkings in different places occurring at different times. The stem *mah-mana* (rdp-spread) typically means 'lay the table', i. e. (sequentially) spread or distribute the various items needed for a meal in the appropriate places. The stem *xē-xelowa* (rdp-split) often means 'distribute, hand out, give sequentially to different people / put sequentially in different places for different people/purposes'.

The notion of coordinated spatio-temporal repetition/distribution is represented in 3. d.

3.1.4.. Progressive

Repetition (replication in time) is necessarily aligned along a single dimension. In space, the replications need not be so aligned, and often are not. Where they are so aligned, however, and especially when the spatio-temporal alignment is such as to approach some salient goal or when the process itself implies spatial motion in a consistent direction, a progressive notion is engendered. This meaning is not a salient meaning of reduplication in Nahuatl, once more probably because there are aspectual affixes which code the meaning explicitly (e. g. *-ti(wih)* 'Verb as you go', *-ti-witz* 'Verb as you come', etc.). But it does occur; e. g. *neh-nemi* 'walk, stroll', which is much more common than the unreduplicated *nemi* with that meaning, saliently includes the idea of repetitive motions (the striding motion) producing progressive motion, often towards a goal. Similarly *mo-toka* (refl-follow) means 'follow each other', but *mo-toh-toka* means 'follow one after the other' and is sometimes used as a kind of adverb meaning 'successively'.

The notion of repetition (in time) may also be correlated with dimensionally-aligned changes in domains other than space, producing other kinds of progressives. Domains of intensity are commonly called on for this purpose, giving a 'Verb more and more' notion. Thus *kuah-kualāni* can mean 'get angrier and angrier'. As these are flavored with different amounts of other ingredients, for instance information about rate and continuity of progress, you get nuances that can be translated as 'bit by bit' 'step by step', or 'by degrees' (e. g. *kualo* 'be eaten', *kua-kualo* 'be nibbled away (bit by bit)'). (The adverb *ah-achi-tzi-tzin* (rdp-bit-rdp-dim), which means 'bit by bit, by little bits, a bit at a time', has reduplication both of the stem and of the diminutive suffix.) The corresponding 'faster' notions of 'quickly', 'precipitously' and so forth do not seem to occur commonly in anything like independent form; again this may be because there are aspectual affixes giving such meanings.

The progressive notion is represented in 3.e, with the specifically spatial progressive in 3. e. i and the progressive of intensity in 3. e. ii.

3.1.5. Plurality

The notion of plurality is much more complex than many analysts imply by making it an atomic feature of some sort. With respect to processual (verbal) concepts it is necessary to distinguish (at least) plurality of occurrences of the process itself (i. e. replication of the process), plurality of its trajector (subject), and plurality of landmarks (objects).

3.1.5.1. Plurality (replication) of the process

Plurality of occurrence of the process itself is the same notion as replication of the process (cf. 3. c), and usually involves the repetitive or distributive notions already discussed (3. a–b): one generally recognizes that one instance of the process is distinguishable from another when they are separated in time or space. As the instances are more and more separated from each other in time and/or space, the salience of their plurality will of course increase, and as they approach a continuum in either domain it will decrease.

3.1.5.2. Plurality of arguments

Reduplication is used to mark plurality of verbal trajectors and landmarks as well. This usage is more common in TN than in ON, in part at least because plurality of trajectors is consistently marked by a suffix in ON, whereas in TN it is not marked in the extremely common present and past imperfect tenses.[19] Thus most TN verbs, especially in those tenses, can be reduplicated to mark plurality of subject or object. Thus e. g. *ki-mah-maka* (*him-rdp-give*) can mean 'they give him (something)', with a plural subject, or 'he/they give(s) him (various things)', where the secondary object (the thing given) is construed as plural. When the primary object (the recipient) is plural, as in *kin-mah-maka* (*them-rdp-give*) (TN), the reduplication can redundantly mark the plurality of that object, giving the meaning 'he gives them (something)' or other combinations may obtain, as in 'he gives them (various things)' or 'they give them (something, various things)'. In the pattern sometimes called "common number" the primary object, especially if non-human or inanimate, is often represented by a singular object prefix, whether or not it would be translated by a plural: reduplication in such cases may be the primary mark of a conceptual plurality: thus *ki-mah-mati* (*it-rdp-know*) may mean

'he knows them, knows several things' (it may also mean 'they know it / them' or 'he really knows it.')

The plural trajector pattern is represented in Figure 3. f, and the plural landmark pattern in Figure 3. g.

The plural trajector pattern also covers cases of plural adjectives, such as *weh-weyi*, (rdp-big) 'good (pl.)'. These are not uncommon,[20] though unreduplicated adjectives can also be used with plural trajectors, and the reduplicated forms may also bear other meanings (e. g. *weh-weyi* in Orizaba, but not Tetelcingo, can also mean 'very big'.) It is also noteworthy that even when the reduplication apparently does correspond to a plurality of the trajector, the modified noun may still not be pluralized: e. g. *tlen wehweyi kamoh-tli* (which big.pl flowerbulb-absolutive) 'the larger flowerbulbs' is perfectly well-formed and sounds more natural than *?tlen wehweyi ka-kamoh-stet* (which big.pl rdp-bulb-pl). Thus it is not necessarily grammatical plurality, but semantic or conceptual plurality, that is at issue.

Also there is sometimes an idea of multiplicity of relationships which shows up. E.g. *ne-tech* (unspec.refl-at) means 'in a bunch', and its adjectival form is *ne-netech-tik* 'all jammed together, corrugated', and similarly *ne-nepan-tik* (rdp-on.top.of.each.other-adj) means 'all piled up on top of each other'.

3.1.5.3. Plural nouns

Finally, when the stem designates a thing rather than a process or stative relation (i. e. when it is nominal), reduplication may indicate replication of that thing. This is typically redundant, as such nouns usually have a plural suffix[21] (replacing the absolutive[22]), and the reduplication may not be required. Thus the plural of *kamoh-tli* 'flower bulb' is *ka-kamoh-tih*, though the form *kamoh-tih* could also be used. In other cases it is less redundant: *ī-mā-yo* (its-hand/arm-possd) 'its branch, one of its branches' does not use the plural because it has the suffix *-yo* 'possessed thing, bodypart, organic system'; it is pluralized (or collectivized) as *ī-mā-māyo* 'its branches' (though the effect is more like 'its branchage'). Similarly a fish's scales are collectively *ī-to-tomin-yo* (its-rdp-money-organic.system) 'its scales' (literally 'its coinage'). Only rarely (e. g. *kō-kone* 'children, babies', cf. *konē-tl* 'baby') is reduplication the sole marker of plurality on a noun.[23]

This 'plural noun' meaning of reduplication is represented in Figure 3. h.

Sometimes the effect of a reduplication seems not to be so much plurality as the closely related notion of abundance. *Altepe-yoh* (town-haver) means 'place which has towns', so the plurality of towns is already specified: *a-altepe-yoh* means 'place with an abundance of towns.'

3.1.5.4. Distributive plurality

These kinds of plurality can also be combined with other reduplicative meanings. This is particularly common with the plurality of verbal arguments. We already mentioned, for instance, the reduplicative pattern which combines distribution of the process in space with its repetition in time. This, more often than not, involves a plurality of landmarks (and possibly of trajectors as well.) E.g. *mah-manah* 'set [the table]' involves putting different plates and utensils around the table, *xē-xelowa* 'distribute [s. t.], hand [s. t.] out' involves a different object or portion being handed to each recipient. (This sort of meaning, though quite common, is considered to be so indistinguishable from the distributive notion of Figure 3.b that it is not represented separately.)

This notion in turn is closely related to the reduplication of nouns and of numbers with meanings like 'three each' or 'each person's Noun'. E.g. *īn-xoh-xomplēlo* (their-rdp-hat) means 'each man's hat', and *kah-kaxtōl-li* (rdp-fifteen-abs) means 'by fifteens', or 'fifteen each, fifteen per (person/place/etc.)'. *Seh-sen* (rdp-one) means 'one each', and the doubly reduplicated *se-seh-sen* means something like 'distributing to each one individually'. *Chikome-tipah* (seven-on) means 'after a week, a week later'; *chi-chikome-tipah* means 'weekly, every week, week by week'; here the "distribution" is, as is usual in verbs, temporal rather than spatial. *Kēch* means 'how many?' and *ki-kēch* means 'how many each?' These meanings are represented in Figure 3. j and 3. k.

There are a number of less regular usages that are doubtless related to this pattern. Among them are *tlā-tlamantli* (rdp-[kind.of]thing) 'a different kind of thing, different kinds of things' and *no-tlah-tlakayo* (my-rdp-body) 'the various parts of my body'.

3.2. Intensity/completivity

There are several semantic paths by which the notions we have been discussing can grade over into a completive or intensifying notion. If the separation of replications of a process through time or space or plurality of participants is minimal, it is natural to view the process as occurring

as completely or intensely as possible in that time and place. E. g. if a woman wipes and wipes a single table at a single time, it is natural to suppose that that table has been completely and intensely wiped. If a process normally affects only part of a landmark, replications of that process distributed in space over that landmark will tend towards its being affected more completely; thus *ki-mōtla* may mean 'he shoots it', whereas *ki-mōh-mōtla* would tend to mean 'he shoots it up, shoots it in many places'. Often one iteration affects a landmark completely but only to a limited degree, but many iterations, each affecting it to a small degree, will affect it to a large degree, i. e. intensely. E. g. if you hit a stake with a rock once you may drive it into the ground a little bit, but if you keep pounding on it you may in the end drive it clear into the ground; if you plow a field once you do not affect it as intensely or completely as if you plow it over and over.

Whether or not it is mediated by such natural semantic affinities, reduplication is commonly used to mean intensity with verbs, and sometimes also with adjectives.[24] Thus *kualli* means 'good', *kuah-kualli* can mean either 'good pl.' or 'very good, of high quality' (or both); *kual-tzin* (good-dim) means 'pretty' and *kuah-kualtzin* means 'very pretty, beautiful, gorgeous', *xōtla* means 'burn' and *xō-xōtla* 'burn intensely', *yōlik* means 'slowly, unhurriedly' and *yoh-yōlik* means 'good and slowly, quite unhurriedly'. *Kochi* means 'sleep' and *koh-kochi* means 'be sound asleep', *ilpia* means 'tie [s. t.] (up)', *iilpia* 'tie [s. t.] up good and tight', and *mo-o-ltpia* (with the reflexive *mo-*, cf. 2.2.5) '(thick yarn or rope) get all tangled up', *āltia* means 'bathe, wash [s. t.]' and *ah-āltia* means 'bathe, wash [s. t.] thoroughly', *pāki* means 'feel happy/pleased' and *pah-pāki* means 'rejoice, be full of joy', *wetzka* is 'smile' and *wē-wetzka* 'laugh', and so forth. This meaning of heightened intensity is represented in Figure 3. m, the prototypical subcase of 3. l, which represents exaggerated or heightened presence of any quality.

3.3. Size

Closely related to the notion of intensity is the idea of size. One might expect that large size would be the major meaning (as previously noted, Sapir included 'increase of size' as one of the meanings for which reduplication is "generally employed, with self-evident symbolism" 1921: 79). Surprisingly, however, small size is, at least in ON, the overwhelming favorite. (TN has neither large nor small size as a frequent meaning.)

When large size is meant it seems to always be a case of a stem which already denotes largeness, so these could be seen as simple examples of intensity or exaggeration. For instance, *wēyi* already means 'big', so the fact that *weh-wēyi* means (in some usages) 'great big' is not surprising; and similarly for *wehka* 'distant' and *wē-wehka* 'far, far away'.

It is worthy of note that the suffixes which get reduplicated for plurality (2.2.5.4) seem to all be, or at least to have been historically, size suffixes, and the diminutives are by far the most common of them. Also, the adjectives and adverbs that imply smallness are very frequently reduplicated.

In one of the strongest linkages between a particular phonological form of reduplication and a meaning, the notion 'little' seems to nearly always involve the (C)V- form of reduplication, not (C)V*h*-.

For instance, a *kolal* (from Spanish *corral*) is an urban lot (usually fenced in)'; *ko-kolal* means 'garden, small fenced-in plot of ground'. A *kalli* is a house, and a *ka-kalli* is a hut or small shelter The most common 'small' meaning, however, is specifically 'toy N'. Thus a doll (but not a tiny baby) is a *kō-konētl* (rdp-baby), a stuffed cat (but not a kitten) would be a *mī-miston* (rdp-cat), a child might build a *ka-kalli* 'toy house' and run his *ka-kamyón* 'toy truck' along an *o-ohtli* 'little/imitation road', and his toy train, despite the non-Nahuatl two-consonant onset, would be a *tre-tren*. The toy truck and toy train are likely (and quite certainly were relatively recently) productive coinages; this usage seems to be very freely productive, and any culturally new item which could be a toy can be indicated by reduplication of the (usually Spanish) name for it. The name *ah-awilli* 'toy' is itself, naturally enough, reduplicated as well.[25] (The root occurs unreduplicated in related words like *awil-tokā* (play-name) 'nickname, mock name'.)[26]

The 'big' meaning is represented in Figure 3.n.i, and the 'little' meaning in 3. n. ii.; the specific meaning 'toy' is represented in 3. o.

3.4. Non-genuineness, 'sort of'

The idea of intensity is almost impossible to separate from the idea of genuineness. All the examples of intensity in section 3.2 could probably also be glossed with the word 'really': 'really good', 'really burn', 'really sleep' and so forth. It is difficult, however, to get clear examples where genuineness alone, apart from intensity, is coded by reduplication. It may well be that genuineness itself is but emphasis on or intensification of characteristic qualities.

However, reduplication is often used in ON to code non-genuineness.[27] This is particularly so for nouns. The tie-in may well be via the 'little' and 'toy' meanings just discussed in 3.3. Miniatures generally, and toys specifically, do not have all the functionality of the real thing, are not 'real' examples of their category.

All the 'toy' cases, and many of the 'little' cases, then, are also cases of the 'sort-of-but-not-really' type. But the pattern includes other examples. A *tlahpixki* is a guardian, someone who keeps an eye out on something like animals or a field of crops; a *tla-tlahpixki* is a scarecrow. *Nakas* means '[s. o.]'s ear'; a *na-nakas-tli* is '(a particular edible) mushroom (shaped somewhat like an ear)'. A *tiopixki* is a priest; a *ti-tiopixki* is a species of grasshopper which has a cross on its back, reminiscent of the cross on a bishop's mantle. (This case is small as well as not-real.) A *mī-mistōn* may be, as previously mentioned, a toy cat; it can also be a begonia (the begonia's shape being vaguely reminiscent of a cat's face.) Sometimes the meaning 'disguised as a N' can occur: a man playing a woman's part in a celebration can be called a *si-siwatl*.

It is also not uncommon for verbs to have a 'sort of' or 'not quite' meaning, which is probably to be related to these usages on nouns. We have already mentioned as repetitive the case of *kō-kochi* 'nod off', but it may involve this meaning also. *Pachiwi* means 'be covered over (usually by accident)', and compounded with *īx-* 'eye, face' it would mean 'have your face covered, be blindfolded'. *Īx-pah-pachiwi*, however, means 'have your vision become blurry', a 'sort of (but not really) covered' meaning. Similarly *tli-waki* (*fire-dry*) means 'toast', but *kama-tli-tliwaki* (*mouth-rdp-toast*) means 'get chapped lips'; again, the lips are only 'sort of' toasted. *mawisowa* means 'contemplate [s. t.], be entertained by [s. t.]', but *mah-mawisowa* 'give [s. t.] a quick look-over'. *Ahkokui* means 'lift, raise [s. t.]'; *ah-ahkokui* means 'try to lift [s. t.], dare to try to lift [s. t. too heavy]' (a 'non-realized' meaning tinged with 'negative evaluation').

Sometimes the meaning of the reduplication seems to amount to a slight softening or amelioration of the meaning of the stem. Thus *nawatia* means 'command, order [s. o.] (to do something)'; *nah-nawatia* means 'counsel, encourage [s. o.] (to do something)'. Here the positive 'proper' meaning (3.5) is probably active as well.

mo-kā-kawa (*refl-rdp-leave*) means 'divorce each other but then remarry each other again'. This could be thought of as a sort of one-time (or half-time) repetition, but may have more to do with the leaving not being a final, definitive leaving; the couple only 'sort of' divorces.

There is a series of reflexive verbs with a noun stem incorporated onto the verb stem *neki* 'want' which mean 'think you are the N, want to be the N'. Usually the noun stem (or the compound stem) is reduplicated. This may be the 'bad' meaning of section 3.5 (these are all negative verbs) or it might be the 'not really a' meaning. (On the other hand, it might be a 'big' meaning as well.) E. g. *mo-tlah-tlaka-neki* (refl-rdp-man-want) 'think you're quite the man, want to be the big man', or *mo-teh-tekiwahka-neki* with *tekiwahki(/a)* 'political functionary', meaning 'think you're the boss, want to be the boss'.

The meaning 'genuine' is represented in Figure 3. p. i, and 'imitation, not real' in 3. p. ii.

3.5. Evaluation, propriety/impropriety

The idea of intensity is naturally tied in to the contrary ideas of approbation and disapprobation. Of whatever quality a process, attribute, or thing is, we tend to regard it as good or bad in some degree. It is natural, then, that if that quality is intensified or exaggerated, we tend to regard it as better, or worse, than normal. This in turn makes it natural that a reduplication which signals intensity will also begin to signal approbation or disapprobation.

Of course for many processes it depends on the situation whether we see the intensity as good or bad. *Koh-kochi* 'be sound asleep' would be better than *kochi* 'sleep' in the case of an insomniac, but not in the case of a person who's supposed to be keeping an eye out on his crops at night. The same could be said of many other examples. Nevertheless some cases of intensity wind up being almost always viewed as good or as bad.

Depending on the kinds of good and bad you get different flavors of approbation or disapprobation. An important kind of evaluation is evaluation with respect to a societal norm. A number of forms share the idea of being 'proper' or 'improper', with the lion's share being of the 'improper', and generally of the negative, variety.

The stem *nōtza* 'talk to [s. o.]', provides a nice example of the contrasting possibilities: *noh-nōtza* is 'speak respectfully to [s. o.]', a positive 'proper' kind of meaning, but *nō-nōtza* means 'pester, provoke [s. o.], give unwelcome compliments to [a woman]'.

The context in which proper and respectful behavior is most crucial in the culture is in relationship to the (Catholic) Church and with one's godparental relations. Generally in such honorific contexts, reduplica-

tions become more common. Usually this does not seem to come to constitute a new, clearly differentiable meaning of the stem, but may be thought of as a kind of honorific inflection. (There may be a direct tie-in through the phonological lengthening accomplished by reduplication: honorific forms are notoriously longer, in many languages and certainly in Nahuatl, than their non-honorific counterparts.) *Tlālilia* means 'place/lay something (out) for [s. o.]'; *tla-tlālilia* means 'offer something politely to [s. o.]', especially 'offer food to [s. o. deceased] on the Day of the Dead'. *Tlakuika* 'sing' often appears as *tlah-tlakuika* when proper singing, e. g. in a church context, is designated, but it probably would not be listed as a separate form of the stem.

Most of these 'proper' meanings could also be thought of as 'formal'. This nuance seems stronger in a few cases. For instance, *tīllia* means 'accuse [s. o.]', and *tih-tīllia* means 'lodge a complaint against [s. o.], accuse [s. o.] before the town authorities.' (*Tī-tīllia* means 'squabble with [s. o.] over who's to blame, try to put [s. o.] in the wrong'.)

There are a few other positive meanings from reduplication. The verb stem *tlapololtia* means 'befuddle [s. o.], make [s. o.] crazy', a notion with a quite strong negative component (it is a causative of *polowa* 'lose [s. t.]'. The reduplicated form, *tlah-tlapololtia*, loses that negative tinge (and also becomes less intense); it means 'distract, entertain [s. o.]'.

Despite the existence of such positive meanings, the negative meanings seem to be much more common and firmly entrenched as standard meanings. They are most usually, but by no means always, of the (C)V-*h* variety. The stem *tlahtowa* 'talk' is already slightly negative in ON (compared with the more frequent *tlapowa* 'talk'), but *tlah-tlahtowa* is a strong word meaning 'talk offensively'. The stem *ilwia* 'tell [s. o.] something' is not frequent in ON but it does occur; *tla-lwia* (*unspec-tell*) would mean (as it does elsewhere) 'talk to [s. o.]', though I have not attested it. But the reduplicated form *tla-tla-lwia* does occur, and the meaning is 'incite [s. o.] to illicit action.' *Istlakowa* means 'kibitz on [s. o.], look at what [s. o.] is doing', but *ih-istlakowa* is 'spy on [s. o.]' with the definite implication that one's purposes in looking are hurtful, *chia* means 'await [s. o.]', and *chih-chia* 'ambush [s. o.]'. *Neki* is 'want [s. t.]'; *nē-neki* is 'lust for [s. t.], want [s. t. bad], want [s. t.] for evil purposes'.

The negative tinge is not always so strong, however. For instance, *atol-wia* (*gruel-vblzr*) means 'pour atole (corn gruel) for [s. o.]' but *ah-atol-wia* means 'spill atole on [s. o., s. t.], stain with atole". Other forms with an edible or potable fluid and -*wia* behave similarly.

The 'good' and 'bad' meanings are represented in Figure 3. q. i and 3. q. ii, and the more specific meanings 'socially proper' and 'socially improper' are represented in 3. r. i and 3. r. ii.

3.6. Purposefulness/contrariness

Another natural outgrowth of the idea of intensity is the notion of purposefulness, deliberateness, and especially (here with a flavor of negative evaluation) contrariness. We weigh an action's intensity by how strongly it persists even when resisted, and we of course resist what we dislike. This meaning shows up in a number of forms, and seems to be particularly amenable to coding with the CV*h*- form of reduplication. One case is *koh-kowa* 'purposely hurt, wound', which contrasts with *ko-kowa* 'accidentally hurt, sicken'. *Ahko-kui* (up-take) 'raise' in its reduplicated form *ah-ahko-kui* means 'lift something that you shouldn't (because it's too heavy)', the implication being that the subject is acting willfully, against the doctor's orders. *Koxotilia* (from the Spanish *cojo* 'lame') means 'make [s. o.] lame'; *koh-koxotilia* means 'purposefully/violently make [s. o.] lame, lame [s. o.] badly'. *Māyawi* means 'make [s. o., s. t.] fall, dump [s. t.] over', whereas *mah-māyawi* means '(purposely) trip [s. o.], make [s. o.] stumble'. And so forth.

This 'willful' meaning is represented in Figure 3. s.

3.7. Lexicalization and productivity

The following discussion applies to all of the meanings we have been reviewing.

Very many, probably most reduplicated stems,[28] including many that are quite regular, are lexicalized in the sense that they are standardized, presumably stored as wholes in people's cognitive systems (though this does not mean that they are not analyzable.) In very many cases there are specializations to one or another of the common meanings, and it is not really possible to predict which meanings will show up. This is especially natural when opposite or somewhat contradictory meanings are coded by reduplication. We have seen a number of instances of this sort of thing in the previous sections: an example that underscores both the flexibility and the arbitrary limitedness of the meanings is that of *pitzak-tik* 'skinny, narrow, thin'. *Pih-pitzak-tik* can mean 'sort of skinny/narrow/thin' (a 'not entirely' meaning), but it can also mean 'thin in parts' (a

distributive meaning). It apparently cannot be used to mean 'very thin' (the intensive meaning). The diminutive form *pih-pitza-tzin*, can, however, mean 'very thin' (an intensive meaning, and/or the 'little' meaning); it can also mean 'thin (honorific)' picking up on the honorific use of *-tzin* and of the reduplication. It is not the case that just any of the reduplicative meanings can be applied to just any stem, but certain ones are favored, either because they fit semantically, they are useful, or they are habitual; usually because of some combination of the three factors.

Nevertheless, some reduplicated stems are probably not already learned by most speakers, and are constructed for a given usage event and understood as novel by the hearers. These will tend to have or be given the more prominent and usual meanings (roughly, repetition or intensity for verbs, plurality or smallness for nouns, distributivity for adjectives), unless the context renders another of the meanings more probable.

3.8. Less clear meanings

3.8.1. Invariant lexical reduplication

A good many stems appear to have a reduplication on them, but never appear without it, so that it becomes a moot question whether there is a reduplication or simply a stem which happens to begin with two similar or identical syllables. In some of these forms (e. g. *tlatlasi* 'cough', *chichiki* 'rub, scrub [s. t.]', *kikisi* 'whistle', the near-onomatopoeic *pihpitowa* '(hen) cluck') there is a repetitive or other replicational meaning that is so salient that one may be fairly confident that that piece of the meaning prompted the reduplication and is still fairly transparently coded by it. However in others it is less clear (e. g. in *pehpena* 'choose out [s. t., s. o.]' it might refer to serially examining many candidates before choosing one, in *tōtomochtli* 'dry corn husk(s)' it might refer to the fact that a corn husk grows in several leaves, in *chichik* 'bitter' it might be the disagreeableness of the taste). In others (e. g. *tōtō-tl* 'bird') it is difficult to see what piece of the meaning might have prompted the reduplication.

Other forms virtually always have the reduplication but may appear in un-reduplicated form rarely or only in diachronically related forms, whose synchronic relationship is more or less doubtful. For instance, *wiwionia* is the normal form for 'swing' and the unreduplicated *wionia* is rarely used (quite possibly some speakers never use it), though the transparent etymology *wion-ia* (*hammock-verbalizer*) and the obviously

repetitive meaning make the reduplication obvious. The adjective **kah-kaxtik* which appears in the word *īx-kahkaxtik* (face-hollow?) 'hollow-cheeked, gaunt-faced, emaciated' is invariantly reduplicated, and although its derivation from *kax-itl* 'clay pot' (by reduplication and the addition of *-tik* 'adjective') is fairly transparent, it may well not be salient in most speakers' minds. As in other cases mentioned above, it is not clear what the import of the reduplication is. More murkily, *eheka* means '(the wind) blow' and is never unreduplicated; while the *eka* of *eka-wian* (shade?-loc) 'in the shade' is probably related etymologically, most speakers apparently do not perceive it any more, so *eheka* is effectively a case of invariant lexical reduplication.

The purely lexical motivation for reduplication is represented in appropriately ad hoc fashion in Figure 4. t.

3.8.2. Differentiation, surprising meanings

Quite often the meaning is, or saliently includes, something essentially unpredictable, which serves to differentiate the reduplicated form from the non-reduplicated form, or one kind of reduplication from another one. Often one or another (or both) of the differentiated forms fits one of the categories defined above, but it is not uncommon to find meanings that do not clearly fit any of them. In all of these cases, it is the individual complex lexical items (particular constructions) that carry the meanings; if all the meaning differences are to be placed at the door of the reduplication, the best that can be said for it is that it means 'something different than the other one.'

For example, *chiva* 'means 'do [s. t.]', and less often 'make [s. t.]'; *chih-chiva* means 'make, build, manufacture [s. t.]'. It would not be easy to predict that the reduplication would have that effect, or that that meaning would correspond to the reduplicated form and the other to the non-reduplicated form. Similarly, *kawa* means 'let [s. o.] go, let [s. t.] loose, allow [s. t.] to happen'; *kah-kawa* means 'drop [s. t.]'. Perhaps the 'negative' sort of meaning is involved in this case, but it is not at all clear and certainly is not all that is going on. Relatedly, the reflexive durative forms of *kawa*, *mo-kaw-tok* and *mo-kah-kaw-tok*, mean, respectively, 'be quiet, not be talkative' and 'slouch, slump'. *Mina* usually means 'stick [s. o., s. t.] with something sharp' though it can occasionally mean 'stick [s. t.] in (to something else)'; it is used for medical injection, for animal stings, for nailing, etc. The reduplicated form *mih-mina* means 'nail down, hammer down'; the repeated blows of hammering are doubtless important, but that is only part of the meaning change. As far as I know the redupli-

cated stem is not used for injections or stings. *Xīkowa* means 'bear/endure/stand [s. t. difficult]'; the reflexive *mo-xīkowa* means either 'restrain yourself (under difficulty)' or (surprisingly) 'be envious'; *mo-xih-xīkowa* means 'despair, give up hoping, no longer be able to bear it.' Probably the negative meaning of the reduplication is active, but there is clearly a lot else going on.[29] *Kochi* is 'sleep', *koh-kochi* is '(multiple subject) sleep' or 'be sound asleep', and *kō-kochi* is 'nod off'. *Kui* is 'take, snatch [s. t.] up'; *kuih-kui* is 'harvest [s. t.]'. Built on the same stem with the addition of the reflexive *mo-* and durative *-tok*, *mo-kui-tok* seems to always take a plural subject and means, for some reason I have not yet fathomed, 'make a racket, talk boisterously'. Also quite mysteriously, its reduplicated form *mo-kuih-kui-tok* means 'be about to die, hardly move or talk, lie in coma at the point of death'. *Pitzowa* means 'kiss [s. o.]', *pi-pitzowa* means 'suck on [s. t.]', and *pih-pitzowa* means 'kiss [s. o.] extravagantly, suck the meat off of [a bone]'. *Teki* means 'cut [s. t.]', *tē-teki* means 'slice [s. t.], cut [s. t.] with a sawing motion', and *teh-teki* in one of its meanings is 'hack [s. t.] off, cut [s. t.] with repeated blows of a sharp instrument.' (Here both meanings are repetitive, and the more interrupted repetitions of hacking are, as one might expect, coded by the (C)V-*h* reduplication.) But the other meaning of *teh-teki* is, quite surprisingly, 'cut [s. o.]'s hair'.[30]

Examples could continue to be multiplied: this pattern is simply extremely common.[31] It is listed as Figure 4. u.

3.8.3. No differentiation

Sometimes the reduplicated and non-reduplicated meanings, or one kind of reduplication as opposed to another, seem to be virtually synonymous (mean exactly the same thing), i. e. there is no consistently discernible difference in meaning that the reduplication signals. For instance, *choktia* and *choh-choktia* both mean 'make [s. o.] cry', and I know of no consistent difference between the two. *Mā-pa-pawi (hand-rdp-coarsen)* and *mā-pah-pawi* both mean 'have the skin of your hand become rough, coarse'; both *pōchiktik* and *poh-pōchiktik* mean 'very bright white', *kue-kueliwi* and *kueh-kueliwi* both mean 'be ticklish' (*kueliwi* does not occur unreduplicated). In a somewhat different pattern, *ih-ix-miki (rdp-eye-die)* and *ix-mih-miki* put the reduplication on different components of a compound stem in a manner reminiscent of the cases of ambiguous stem boundaries (2.2.5); but both mean 'have your vision go foggy, not be able to see', and again it is not clear that there is any consistent meaning difference whatsoever. *Kuā-tix* is a compound of *kuā-* 'head' and *tixtli* '(tortilla) dough'; it means '[s. o.]'s brains'. So does *kuā-ti-tix*, and while

we might suppose the reduplication is of the 'not really' variety (3.4) there is no clear difference in meaning between the two stems.

This pattern is listed as Figure 4. v.

3.8.4. Phonological motivation

In a few cases reduplications may be motivated for phonological reasons. This motivation may be combined with some degree of semantic motivation from one or another of the meanings listed above.

In TN there is a conspiracy of techniques to avoid 1-syllable content words or stems, and reduplication is one of the tactics used. The stem *pāki* means 'be happy', and the predicted third person singular preterite form would be *pāk*, but *pah-pāk* must be used instead. Similarly the stem *ka* 'be' is reduplicated in singular forms such as *ikaka* 'he/she/it is' (the *i* is apparently epenthesized also to expand the word); the form *ika* is possible but less preferred; cf. also the plural form *kateh* 'they are', which does not permit the reduplication (**ka-kateh*). Similarly the stem *te* 'stone, rock' is not allowed in TN to appear as *tetl*, the form ON and most other variants use; rather it is *tē-te-tō*, with the vaguely diminutive suffix -*tō* added as well (contrast the plural *te-meh* 'stones, rocks', where one might have expected **(tē-)te-to-tō*, following the rules for pluralization of other forms ending in -*tō*.)

This motivation for reduplication (which although it is not a meaning in the traditional sense does qualify as a peripheral kind of semantic structure in CG) is listed as Figure 4. w.

4. Examples

Just to give some idea of the naturally occurring range of cases of reduplication, and of the limitedness of even this extensive an analysis, I have picked a dozen consecutive cases[32] from a database of sentences written in ON to illustrate words in a dictionary. A reduplication occurred in about every third sentence in the sampled portion of the database. Where the sentential context was clearly not relevant I have omitted it to conserve space, but in other cases I have retained it. The reduplicated word under discussion is separated into morphemes and a morpheme by morpheme translation is given; a word for word translation of the other words and less literal translation is also given where appropriate. A brief discussion follows in each case. References to meanings or phonological shapes are, unless specified otherwise, to their representations in the different Figures.

(1) *Se n siya mach kualli okikxitihkeh kah-kaxan-ki omokah.*
one the chair not good they.footed.it, rdp-floppy-adj it.remained.

'One of the chairs didn't get its feet put on well; it turned out wobbly.'

Here we have reduplication on the adjective *kaxanki* 'floppy, loose', which is a sort of participle of the verb *kaxāni* 'go slack, flop, come loose.' The difference between the straight *kaxanki* and the reduplicated form here is difficult to specify. The flavor seems to be distributive (3. b) or repetitive (3.a, but with the time unprofiled): it is either that the chair is loose in different places or that it wobbles at various times. A sort of plurality of a non-central argument (the feet) is probably rightly to be discerned, and in fact the final clause can be construed with the plural feet as subject. (It was translated to Spanish as *quedaron flojas*; "they" rather than "it" turned out wobbly.) However, the sentence would be perfectly acceptable if three feet were solidly attached and only one was wobbly. A notion of undesirability (related to the 'bad' sense of 3. q. ii) is clearly present. Although *kaxanki* is the more common form and could be used here, it wouldn't fit as well; it works better with things that are normally, or characteristically, loose. (Note that in this case the reduplication works against the idea of completeness implied by 3.l.)

(2) *pi-pil-tih* 'boys'

Pipiltih is a fixed vocative form meaning 'boys'[33]; the root *pil* means 'child' in possessed plural constructions and with the suffix -*wah* 'possessor of', e. g. *no-pil-wan* (my-child-pl.possd) means 'my children (of either sex)', not 'my sons', and *pil-wah* means 'woman who has had a child'. It also occurs in a number of compound forms, meaning 'bodily projection' in most of them, e. g. *no-mah-pil* (my-hand-child) 'my finger'. The reduplication is thus clearly associated with a fixed form (4. t) but is almost certainly to be identified with the plurality of that form (3. h).

(3) *N okikxitekkeh n Bulmaro yen kan*
The they.foot-cut.him the Bulmaro that.one where
o-ko-ko-l-ti-ka chikawak.
past-rdp-hurt-nmlzr-vblzr-pluperf strong.
'Bulmaro's foot that they operated on is the one that had gotten so badly infected.'[34]

The stem fragment *kow* (which by regular rule is *ko* before the nominalizer -*l*) normally occurs only in reduplicated form, but its reduplicatedness is clear from the fact that it can take either the CV- or the CV-*h* reduplication. *koh-kow(-a)* means 'damage, intentionally hurt, wound' (3.s); and *ko-kow(-a)* refers to non-intentional hurt or to illness. A number of derivative meanings from the 'illness' sense exist, and 'be infected' (*koko-l-tia*) is one of them. This case is probably best classified as one of the 'hard-to-specify' variety. It may involve the 'bad' idea; it is certainly lexically mandated.

(4) *mo-tō-tol* 'your turkey hen'

The stem *tōtol* (which in isolation takes the 'small animal' absolutive suffix -*ih*), means 'turkey hen'. (The word for 'turkey cock', *wehcho* or *wehxōlō-tl*, is unrelated.) *Tōtol-ih* 'looks' reduplicated, and perhaps the stem can be related to the (also apparently reduplicated) form *tōtō-tl* 'bird'. However, the putative irreducible stem *to* or *tō* never occurs unreduplicated. This is clearly a case of a lexically fixed reduplication which is part of the stem.

(5)

N Abelardo	*k-ih-i-llia-h*	*seki*	*tlalli,*	*noso*	*mach*
The Abelard	*him-rdp-epenth-tell-pl*	*several*	*land,*	*but*	*not*

kittilia	*katltleh*	*kitlanevis*
not he.sees.it.in.it	*which.one*	*he.will.rent.it.*

'They're offering Abelard several fields, but he hasn't decided yet which one he will rent.'

The unreduplicated form *killiah* means 'they tell him (something)', or 'they call him (by a particular name)'. The reduplicated form of the stem can mean either 'offer (esp. for hire)' (as in this context) or 'promise'. The two notions are closely related; if I offer you something I am in effect promising it to you, given your fulfilment of requisite conditions. The notion of offering may have a repetitive notion to it; an offer is likely to be repeated several times before it is finally accepted. The notion of promise may involve intensity or reality: if I promise you something I am *really* saying it will happen or that I will give it to you. But I would have to class this among the lexicalized cases whose effect is rather different from what might have been expected.

Note, by the way, that this is one of the cases of reduplication of an epenthesized vowel (parallel to 2. o); the form *moholliah* (parallel to 2. p)

would be used to mean 'they offer (something) to each other, they promise each other (something).)

(6) *tzo-tzol-li* 'cloth'; *xo-xoktik* 'blue/green'

The putative stem **tzol* 'cloth, rag' does not appear by itself, though it may be related to the adjectival stem *sol-* 'old, worn out'. This is another case of lexical reduplication. The reduplication may possibly be related to the naturally mass nature of the designated Thing, i. e. to the fact that cloth is typically the material, not just a piece of it. Yet *se tzotzolli* (one cloth) 'a cloth' is a perfectly normal usage.

Also in the same sentence was *xo-xok-tik*, again a stem lexically specified to be reduplicated. The stem may be the same *xok* as appears in *xoktli* 'orange (fruit)' and *xoko-k* 'sour, bitter, acid', the connection coming through the notion of unripe fruit which is both sour and typically green.

(7) *Tla yi kua-kuala-k n arros, xikkixti, Gudelia.*
If already rdp-pop-rapid.sound the rice, take.it.out, Gudelia.
'If the rice is already bubbling, take it off (the fire), Gudelia.'

This is one of the cases from 3. a. iii–iv where a verb stub or root is reduplicated with the suffix *-ka* to mean 'make the small version of the sound repeatedly'. The reduplication corresponds to the rapid and distinct (both in time 3. a and in space 3. b) occurrence of the bubbling when a pot of rice boils. The 'do it once in a big way' version of this stem, by the way, we have already seen: it is *kualā-ni* and means, not as we should expect, 'pop loudly once' but 'be/get angry'. Parallels such as *blow up* or *pop off* are doubtless instructive, but the verb is not as perfective (punctiliar) as those parallels would suggest.

(8) *San ok po-pok-a n atl, pero machchi kuakualaka.*
Just still rdp-smoke-vblzr the water, but not already it.bubbles.
'The water's still just steaming, but not boiling (bubbling) yet.'

Popōka '(it) smoke(s)' looks like a reduplication+*ka* verb (3. a. iii–iv), and its meaning would fit well (things that smoke typically send out small, repeated puffs), but it is not at all a typical case. The others have a bisyllabic stem (like *kuala*) between the reduplication and the suffix; this case would have only *pō*. Furthermore, *pōk-tli* 'smoke (n.)', together with an intransitive verbalizer *-a* provides a quite reasonable analysis.

Another noun form, *pō-pōch-tli* means 'incense', however, and can be used as evidence for analyzing *pōk* into *pō-k* (and *pōch* into *pō-ch*) − the problem is that it is difficult to identify the *-k* (and only a little less so the *-ch*) with any independently occurring suffix. In any case, there is no corresponding form with *-ni*, *(po-)pō-ni*; rdp-stem-*ka* forms also typically have a corresponding causative in *-tza* (e. g. *ki-kua-kuala-tza* 'he boils it, makes it bubble'), but there is no **po-pō-tza* form. In these ways *po-pōka* does not fit the rdp + stub + *-ka* pattern. Still, we have a lexically required reduplication, in which the reduplication probably corresponds to a 'continual' or 'repetitive' notion within the meaning.

(9) *¿Tlenon kuakualaka?; amo mo-mi-milo-s.*
What.is.that it.bubbles? not.non-declarative refl-rdp?-spill-fut
'What's that that's boiling there? Don't let it boil over!'

The stem *mimilowa* is lexically specified to be reduplicated. In spilling, one bit of the liquid after another moves over the lip of the container, and probably the reduplication is to be related to that continuously, or, as it is sometimes, sporadically repetitive process (3. a).

(10) *ich-po-pōch-tih* 'girls'

The stem *(i)chpōch* means 'girl, daughter'. The element *pōch* is shared with the stem *tēlpōch*, which means 'lad, teenaged son', but *(i)ch* and *tēl* are not clearly identifiable, and other forms suggest other analyses. The location of the reduplication makes it clear that at one time at least, *(i)ch-* was a prefix and *pōch* the stem (cf. the discussion in 2.2.5.3). The placement of this reduplication is clearly lexically specified; its meaning is that of plurality of the designated noun (3. h), in redundant conjunction with *-tih* plural.

(11) *Maski Benito ivan Armando amixpah*
Although Benito and Armand before.your.pl.face

mo-tlah-tla-pov-ia-h, pero mokualankaittah.
refl-rdp-unspec-count-applic-pl, but they.see.themselves.with.anger.

'Even though Benito and Armand talk to each other (politely) when they are with you, they really hate each other.'

Here we have a reduplication of a stem which includes the unspecified object pronoun *tla-* (cf. 2. r). The reduplication may relate to the plurality

of the subjects (3. f) or, more likely, to the multiple occasions on which Benito and Armand are understood to talk to each other in the addressees' presence (3. a, probably 3. a. i). It is also very likely that a 'politely' nuance (3. r. i) is intended or will be taken here, as reflected in the translation.

(12) *Itlah ik xi-k-tlah-tla-polo-lti-kan*
Something with.it impv-it-rdp-unspec-lose-cause-subjnct.pl

Hipólito, makamo san kualankamikto.
Hippolytus, may.it.not.be just he.dies.of.anger.dur

'Keep Hippolytus entertained with something or other, so that he doesn't just sit there being angry (throwing tantrums).'

Hippolytus is presumably a small child – children are conventionally spoken of as likely to sit and stew, or throw tantrums, unless entertained. (This despite the frequency with which they are left alone and are perfectly content about it.) As in the previous example we have reduplication of a stem formed with *tla-* (parallel to 2. r). The reduplication here probably means mostly a punctuated or unpredictably repetitive action (3. a. i). (In entertaining a baby one does things repetitively, but tends to jump from one repetitive action to another, lest the child become bored.)

5. Complicated linkages between the two poles

Figure 4 juxtaposes the semantic and the phonological networks associated with reduplication. Reduplication as a phenomenon in Nahuatl is largely represented here; although the bias is strongly towards ON in the semantic structure, most dialects seem to have something similar, though differing considerably in detail.

How is this complex phonological structure linked to the semantic one? I have drawn curved lines to represent the links in the cases where there seems to be some special affinity. These indicate that, from the point of view of symbolization of the semantics by the phonological structure, there are two major phonological subcategories: the (C)V- structures of Figure 1. a and 1. g and the (C)V-*h* structures of 1. e and 1.h. The following meanings tend to line up with (C)V- reduplication: (a) repetition, especially quickly repeated sounds and visual events, and (b) the 'little', 'toy', and 'imitation' meanings. With (C)V-*h* reduplication we find an affinity for (c) separated repetitions, (d) the 'number each' and

'number by number' and 'each one's noun' meanings, (e) the 'intense' or 'strong' meaning, and (f) the 'bad', 'improper', and 'willful' meanings.

Only in a few cases, however, is the affinity so strong that linkage with the other phonological structure is impossible. And in the rest of the cases, any or all of the phonological structures are linked. These linkages are not represented in the diagram, because they would make it even more impossible to read. But the true picture is, if I understand it correctly, that complex.

6. Concluding comments

How does one analyze a phenomenon as complex as reduplication in Nahuatl? It is very difficult to fit into any kind of a morphemic straitjacket, or even to make a reasonable dictionary entry for it. It straddles or blurs a number of category lines.

(1) It straddles the border between inflectional and derivational morphology. Sometimes its effects are regular, minor, productive tweakings of the meanings; other times they are drastic, irregular, highly surprising jumps in meanings.

(2) It straddles the border between one lexical item and two, or many, lexical items. There is some reason to particularly separate out the (C)V- and (C)V*h*- patterns from each other, as they so often contrast with each other. Yet it would often be very difficult to tell which would be used for a given meaning, and in fact both are often used for the same or almost indistinguishable meanings. (Remember that in Figure 4 most of the symbolizing links from the phonological to the semantic structures are omitted, that basically any two structures can be linked up, though the linking lines which are drawn will tend to be respected.)

(3) It straddles the border between additive and process morphemes; it clearly is prefixal and adds phonemes, but you can only know which phonemes when you know the stem it is added to; at which point you copy phonemes (a morphemic 'process' if there ever was one).

(6) It straddles the border between phoneme and ideophone; the meanings that it symbolizes have a strong iconic motivation, yet they can be quite arbitrary in certain cases, as arbitrary as using one phoneme instead of another.

(7) It includes within its semantic scope meanings so diverse and contradictory that it is hard, when analyzing, to understand how they can form a useful category. Imagine a normal morpheme meaning repetition,

distribution, reinforcement or exaggeration, plurality, intensity, small size, non-genuineness, 'sort-of' occurrence, badness and particularly impropriety, goodness and particularly propriety, and a host of less systematic meanings.

Yet it functions perfectly well, and has for centuries, as part of the Nahuatl language. It is indeed a beautiful thing.

Notes

1. My understanding of the phenomenon has benefitted greatly from the help of many native speakers. Chief among them are Trinidad Ramírez Amaro, from Tetelcingo, Morelos, and Victor Hernández de Jesús, of Rafael Delgado, Veracruz. Hernández authored all the examples in section 4, and provided glosses and lexical discussion for all the Orizaba Nahutl examples. Data in section 2 are from Tetelcingo unless they are marked (ON), and those in other sections are from Orizaba unless they are marked (TN) or otherwise identified. The conventions used for data citation are listed in footnote 4. Since the ON area is a large one, comprising many towns and communities, what is presented as the pattern for ON is best taken as one of the patterns that can be found in ON. The spelling "Nawatl" is used in this paper for Orizaba, where the orthography warrants it: the traditional spelling "Nahuatl" is used elsewhere.
2. I take comfort from finding myself in good company. Carochi, the greatest of the early authors of *artes* (grammars) of Classical Nahuatl, comments (1645: 70): "El saber en que ocasión se ha de doblar esta syllaba primera, y cómo se ha de pronunciar, si con saltillo, o sin él, y saber, que significa puntualmente el verbo, quando la primera syllaba doblada tiene saltillo, y quando tiene acento largo, es la cosa más difícil que ay en esta lengua, y dudo que los que no la saben naturalmente, puedan vencer esta dificultad … que ni aun los muy peritos desta lengua aciertan a dar raçon desta diferencia, y si no se guarda, será vn barbarismo, y muy grande impropiedad, y esta dificultad deue ser la causa por que los autores de los artes no tratan desto." ("*To know upon what occasions this first syllable is to be doubled, and how it is to be pronounced, whether with a* saltillo*, or without it, and to know, precisely what the verb means, when the doubled first syllable has a* saltillo*, and when it has the long accent, is the most difficult thing that there is in this language, and I doubt that those who do not know it naturally, can possibly conquer this difficulty… [so] that not even those who are quite expert in this language manage to accurately account for this difference, and if it is not maintained, it will be a barbarism, and a very great impropriety, and this difficulty must be the reason why the authors of the* artes *do not treat of this matter.*")

3. In calling the CV- pattern "basic" I mean that it is conceptually basic, in that the other patterns can mostly be derived by one small change from it. However, it is not necessarily more frequent than e. g. the CV-*h* pattern (2.2.2), or more salient in speakers' minds, characteristics crucial to identifying other kinds of "basicness". It is worth noting that the CV-*h* pattern is the only productive form of reduplication in Michoacán Nahual (CV- reduplication occurs only in frozen forms − Sischo 1979: 352). Carochi (1645: 70−73) also discusses the CV-*h* pattern first, implying in some degree that he considered it basic.
4. For ease of exposition and comparison, forms are given in a common orthography using macrons for 'long' vowels, although those are phonetically tense or diphthongized rather than long in TN. The other orthographic symbols used are relatively straightforward, except for *x*, which represents the palato-alveolar sibilant [š] (IPA[ʃ]), and the digraphs *ch* (= [č]/[$t^{š}$]), *ku* (= [k^{w}]), *tz* (= [¢]/[t^{s}]), and *tl* (= [ƛ]/[t^{l}]). *h* (the "saltillo") is a glottal stop ([ʔ]) in a few ON towns. The phoneme *w* is sometimes pronounced as a bilabial fricative [β] in both dialects (under different circumstances).

   Nahuatl is agglutinative, and a number of the stems represented here cannot be used as written without the addition of various affixes. This is especially true of transitive verb stems, which require prefixes marking the person and number of the object. (All verbs also require a subject prefix, but it is a zero in third-person forms.) In the glosses for transitive verb stems I include an indication between square brackets of the object which must be represented prefixally. Usually it is "[s. o.]" (= someone) for typically human objects, or "[s. t.]" (= something) for typically non-human ones. Thus e. g. *tza-tzahtzi* (the first example in the text) can be used with no overt affixes, since it is intransitive (and since TN, unlike ON, does not have a suffix for plural present tense verbs); such a usage would be translated 'they shout, many people shout, there is shouting'; it may also have an overt subject prefix (e. g. *netzatzahtzi* 'you pl. shout'. *Nō-nōtza*, however (the second example) requires an object prefix to be used (e. g. *kinōnōtza* 'he/she/they chat(s) with him/her', or *nekinōnōtza* 'you pl chat with him/her'), and thus it is glossed 'chat with [s. o.]'. Adjectival and nominal stems are generally cited with the suffixes they typically appear with, and can be used as cited (e. g. *tolontik* 'round' can be separated into *tolon* 'round' and *-tik* 'adjective'; *tōtōtl* 'bird' has the 'absolutive' suffix *-tl* on the stem *tōtō*.) Invariably possessed noun stems and the related postpositions have a notation such as "[s. o.]'s" or "[s. t.]" to make clear what kind of argument must be expressed prefixally, e. g. '[s. o.]'s sandal' or 'above [s. t.]'. Polymorphemic stems are represented with no indication of morphemic divisions where the stem's morphemic composition is not relevant to the discussion. Generally any form of more than two syllables can be assumed to consist of at least two morphemes. Where a morphemic breakdown is useful, it is often glossed between parentheses (*in this type-face*).

The following abbreviations are used in various places, especially in glosses: DIM: 'diminutive', DUR: 'durative', EPENTH: 'epenthetic vowel', HON: 'honorific', IMPF: 'past imperfect tense',ON 'Orizaba Nahuatl', PL: 'plural', PRES: Present, REFL: 'reflexive',SG: 'singular', SUBJ: 'subject', TN: 'Tetelcingo Nahuatl', UNSPEC: 'unspecified object'. 'He', 'him', and 'his' are used in glosses for a human who could perfectly well be of either gender, to avoid the awkwardness of such "he/she" glosses as those in the preceding paragraph.

Further information on Nahuatl generally, and the Tetelcingo and Orizaba dialects in particular, may be found starting at http://www.sil.org/mexico/nahuatl/familia-nahuatl.htm.

5. A description of the Tetelcingo (Mösiehuali) vowel system, including samples of the pronunciation of the vowels, may be found at http://www.sil.org/mexico/nahuatl/tetelcingo/G011a-Vocales-NHG.htm. A sample of how the contrast sounds in Orizaba Nawatl (ON) may be found at http://www.sil.org/mexico/nahuatl/orizaba/G011c-Vocales-largas-NLV.htm.
6. This *h* is the reflex in TN (and many other places) of the *saltillo* ('little jump') mentioned in the quote from Carochi (fn. 3), which was a glottal stop in at least some variants of Classical Nahuatl and is in a number of modern variants as well, including North Puebla Nahuatl (Brockway 1979, Brockway, Hershey de Brockway, and Santos Valdés 2000). I write it as ′ in transcribing data from such dialects. In most ON towns it is pronounced [h], and it is written *h* in the standard orthography, even though at least some pronounce it as a glottal stop.

   Reduplication with *h* occurs elsewhere in Uto-Aztecan: cf. Cora ti'ikɨ́h-kɨ'ɨre *distributive-rdp-produce.crop* 'it yields a good crop' (Eugene Casad pc.), in a language where *h* and ′ contrast.
7. *Asi* is one of the relatively few stems that has both a transitive and an intransitive usage.
8. Casad (1984: 299–301) reports rightward operating reduplications for the related (southern Uto-Aztecan) language Cora.
9. Andrews (1975: 120, 17.3.2) reports the identical pattern for Classical Nahuatl, and comments "It is as if the /o/ of the reflexive has become the initial vowel of the stem, and this new initial vowel, rather than the entire prefix, is reduplicated." Cf. also Carochi on such a case (1645: 70 b) "por perderse la *i*, de *ilpia*, y preualecer la *o*, del semipronombre *nino*, ésta se dobla, como si fuera inicial del verbo." ("*Because the* i *is lost, of* ilpia*, and the* o *of the semipronoun* nino *prevails, the latter is doubled, as if it were initial to the verb.*")
10. Andrews (1975: 119–120, 17.3.1) reports this pattern in Classical Nahuatl with *tla-*, and gives an example of the reduplication occurring both on the stem and on the prefix: *tlah-tla-koh-kōwa* (or in standard Classical orthography *tlah-tla-coh-cōhua*) meaning 'to buy many things repeatedly'.
11. The replacement of the absolutive suffix *-tli* by the plural suffix *-tih* is according to the normal pattern.

12. For a fuller discussion of what stem-hood vs. affixhood involves under CG, with specific reference to ON, see Tuggy (1992).
13. This is the TN form; the ON form is *tekak*, but the same pattern holds in ON also but is much less obligatory and (therefore) less productive.
14. Another example in TN (not ON) is *-tō(n)* 'diminutive, etc.' which reduplicates as *-to-tō*. Sometimes there is an alternation of pre-stem and pre-suffixal reduplication: e. g. *tzī-tziki-tzī* (rdp-little-dim) 'little (sg.)', *tziki-tzi-tzī* 'little (pl.)'; *sī-siwan-tō* (rdp-woman(?)-dim) 'girl', *siwan-to-tō* 'girls'.
15. The sentence in which it occurred was: *Kualli owallaya n xochitl, noso owalmimixkiawik, machok nochi otlamochih*, which is translated 'The flower crop was coming along well, but it started drizzling and drizzling, and not all of it came to harvest.'
16. Casad (1984: 299) reports a 'past durative tense' meaning for reduplication in Cora.
17. Carochi (1645: 71 a–75 b) gives these verbs a separate chapter of their own, and cites dozens of examples.
18. The *-ni* forms may be reduplicated also, when the designated sounds are repeated, or for plurality, etc. E. g. *tzih-tzilī-ni* means either 'plural subject ring (e. g. church bells ring)' or 'singular/plural subject (e. g. church bell(s)) ring over and over.' Both the *-ni* and the *-ka* verbs have their own causative constructions; *-ni* verbs usually take *-nia*, but *-ka* verbs take the otherwise rare *-tza*. Thus *tzilīnia* means '(person) ring [s. t., e. g. a church bell]' and *tzi-tzili-tza* means '(person) ring [s. t., e. g. a telephone bell or a buzzer]'. As with *-ka*, *-tza* generally requires that the stem be reduplicated.

    The *-ka* suffix is cognate with a 'habitual mode' suffix in Cora and thus would reconstruct for proto Southern Uto-Aztecan: e. g. *tí'i-kɨ'iši-kai šaye'e* distributive-buzz-habitual article rattlesnake 'the rattlesnake buzzes (with its tail)' (Casad p.c.)
19. This neutralizes the contrast between forms with the subject markers *ti-* 'you sg/we' and *ø-* '3psg/pl'; forms in *ni-* 'I' or *an-/na(n)-/ne(n)-* 'you pl.' are still clear as to their singularity vs. plurality.
20. Beller and Beller (1979: 255–260) indicate that in Huasteca Nahuatl this is the major meaning of reduplication in adjectives.
21. This is less true of inanimate nouns, which often use the singular; cf. the example with *kamohtli* two paragraphs back.
22. The absolutive suffix *-tl/-tli/-li/-itl* occurs on most non-possessed and non-pluralized native nouns, in effect with all but a subclass of nouns, whenever they do not have any other affixes attached.
23. Sullivan (1976: 31–33) gives five such examples from Classical Nahuatl, including *ko-ko(w)a* 'snakes' and *te-teo* 'gods'. She notes variability, and usage of reduplication along with explicit plural suffixes.
24. Beller and Beller (1979: 272–273) report that intensity is the major meaning of reduplication on verb stems in Huasteca Nahuat.

25. The form is obviously exceptional to the tendency stated above for the 'little' meaning to take the reduplication without *-h*. It is susceptible to some small degree of explanation by its being a vowel-initial stem, with the V-V pattern mostly confined to verbs. Probably more important is that *ahawilli* is an old word (Molina 1571: 3 [front side] shows it as the basis for several compounds and other lexical constructions), and the strong 'toy' – (C)V.rdp link is doubtless more recent historically. Also *ahawilli* was derived from a repetitive verb stem *ah-awia*, which Molina 1571: 3 [front side] glosses as 'regozijarfe y tomar plazer' ('be glad and take pleasure'), where the reduplication probably was of the "intense" variety (3.2).
26. There may be a tie-in with honorific usage (3.5) in that an important part of the Day of the Dead ceremonies is leaving toys out as part of the offering for dead children, a *tā-tanah-tzin* (rdp-network.bag-dim/hon) for boys and a *ma-mawilan-tzin* (rdp-handbasket-dim/hon) for girls, with an *ah-awilli* 'toy' or two in it, and some *du-dulse* 'candy' as well. (Note that the candy is not miniature, but still has a parallel reduplication to that on the little bags or baskets and the toys.)
27. There is, of course, very little referential difference between the positively-oriented meaning of near-genuineness: 'almost really, as if it were real'; and the negatively-oriented one of non-genuineness: 'not really, just sort-of'. My intuition is that the ON reduplications tend more toward the second nuance.
28. In counts in text the clearly standardized cases quickly come to decisively outnumber the clearly productive ones. The number of possibly productive cases is rather larger than that of clearly productive ones, but the clearly standardized ones still outnumber both categories together. E. g., in the 13 examples of section 4, 11 are clearly standardized, with example (11) possibly productive, and only example (1) probably productive. This token frequency tilt towards the standard forms is doubtless representative. It might be the case, however, that if much larger quantities of data were analyzed the type frequency balance would eventually swing to the less-clearly-standardized cases.

    This is of course something that can be expected to vary from dialect to dialect. In TN, where reduplication for plural subject, as well as for repeated action, is highly productive, the number and proportion of non-lexicalized cases is undoubtedly higher than in ON. Brewer and Brewer (1962: 271) make it quite clear that they have not included such forms in their *Vocabulario*.
29. Brockway (1979: 173) reports this as one of a few cases of "negation by reduplication" in North Puebla Nahuatl, where *xi'-xikowa* means 'renege' (he glosses *xikowa* as 'endure'). The other cases he cites are *ne'-neki* 'not want' (cf. *neki* 'want'), and *tla-po'-pol-wia* 'forgive (i. e., not cause loss)' (cf. *polowa* 'lose'). The first is, apparently, intransitive as well as negative, though it may also be reflexive (Brockway, Hershey de Brockway, and Santos Valdés 2000: 367). The second case has another analysis available, something more like 'cause (faults) to be completely lost for [s. o.]' (in most variants *poh-*

polowa has the meaning 'erase', and *poh-pol-wia* is a transparently derived applicative 'erase for [s. o.]'; the specialization of that meaning to 'forgive [s. o.]' is not a great jump.)
30. One would have expected an applicative to be necessary for such a meaning. For the same stem in Ameyaltepec, Guerrero, Amith and Çanger (1999) note that "from *-teki* 'to cut' we have *-tehteki* 'to cut up repeatedly' (e. g. with scissors) and *-tēteki* 'to slice'", and Andrews (1975: 118−199, 17.2.1−2) for the same pair in Classical Nahuatl reports 'hack s.th. to pieces' and 'slice s.th. up'.
31. Carochi's description contains a number of parenthetical comments like the following (1645: 70): "... y de camino aduierto, que *nihuèhuetzca*, con saltillo significa, me sonrio. Pero *nihuēhuetzca*, el primer *huē*, largo, significa me rio con mucha gana." ("*... and along the way I serve notice, that niwe'wetzka, with saltillo means, I smile. But* niwēwetzka*, the first* wē, *long, means I laugh heartily.*")
32. There were some duplicate cases in between which I did not list here, e. g. *ichpopochtih* 'girls' was used twice and only one of those cases is cited, and since *kuakualaka* occurred several times (it happened to be one of the forms illustrated), I only discuss it once.
33. ON has very few vocative forms − this is quite anomalous in that regard.
34. Note that the head of the relative clause is the incorporated noun *kxi*, modified by the article *n*. You're not supposed to be able to do that!

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Conceptual autonomy and the typology of parts of speech[1] in Upper Necaxa Totonac and other languages

David Beck

1. Prototypicality, typology, and parts-of-speech systems

The papers in the present volume are unified by the common theme that the application of Cognitive Grammar (Langacker 1987 a, 1991) to the study of non-Indo-European languages offers important insights into the structures and functions of human language. An obvious extension of this line of inquiry is to ask what it is that the application of Cognitive Grammar has to offer to the study of linguistic typology – in other words, what generalizations does Cognitive Grammar allow us to draw that throw light on the commonalities and variations found in the grammatical systems of all languages, Indo-European and non-Indo-European alike? This paper is an examination of how two fundamental concepts of Cognitive Grammar – *prototypicality* and *conceptual autonomy* – allow us to tackle a particularly difficult linguistic problem, a cross-linguistically viable semantic characterization of parts-of-speech, and offers a solution that casts new light on the relationships between a range of morphosyntactic phenomenon which previously have had to be treated in distinctive and unrelated manners.

It is widely recognized that, while the sets of semantic entities denoted by nouns and verbs are not precisely the same in every language, there is a high degree of commonality in what meanings are expressed by words belonging to these two parts of speech (e. g. Lyons 1977; Hopper and Thompson 1984; Langacker 1987b; Croft 1991). This paper will argue that nominal and verbal semantic prototypes represent either end of a continuum of conceptual autonomy running from the core semantic domain of nouns – semantic THINGS – to the core domain of verbs – semantic RELATIONS (Langacker 1987 b). Intervening points on the continuum are occupied by meanings which vary cross-linguistically with respect to their morphosyntactic *closedness* – that is, the facility and necessity with which figures in their semantic make-up are elaborated in the

process of sentence-composition. Prototypical semantic THINGS (e. g. *ball*, *boy*, *dog*) are completely autonomous and, hence, *closed* in the sense that when used in linguistic structures they do not require further elaboration of any component of their meaning; prototypical semantic RELATIONS (e. g. *hit*, *run*, *give*), on the other hand, do require the elaboration of their subcomponents – their trajectors and profiled landmarks – and so can not be used in expressions in the absence of other elements expressing (or suppressing) these components. Thus, the expression in (1 a), which fails to express the landmark of the verb *hit*, is infelicitous, whereas those in (b) and (c) are not:

(1) a. **The boy hit.*
b. *The boy hit the dog.*
c. *The dog was hit*.

As a prototypical semantic RELATION (a transitive verb), *hit* requires (barring unusual contexts) the elaboration of both its trajector and its landmark (1 b); failing this, it requires a syntactic device such as the passive in (1 c) to suppress the expression of one of these subcomponents.

A key typological prediction made by prototype-based theories such as Cognitive Grammar is that in any classificatory system there will be intermediate or peripheral elements that show cross-linguistic variability with respect to their class membership and/or the range of categorial properties they display. Following an introduction of some concepts in Section 2, I will illustrate this type of variation along the parameters of conceptual autonomy and morphosyntactic closedness, beginning with a discussion of words expressing HUMAN CHARACTERISTICS (Section 2.1), which show both cross- and intra-linguistic variability with respect to their classification as adjectives, verbs, or nouns. In Section 2.2, I examine inherently and inalienably possessed nouns, which – while most frequently classified as morphosyntactic nominals across languages (see, however, Evans 2000 on kinship terms that are verbs) – represent a type of entity intermediate on the scale of conceptual autonomy. Nouns of these types either require the elaboration of their possessor and, hence, are non-closed (inherently possessed nouns), or accord special status to the expressions of the nominal elements on which they are conceptually dependent (inalienably possessed nouns). Also intermediate on the scale of conceptually autonomous entities are deverbal nouns and nominalizations, which are treated briefly in Section 2.3. The same variation in degree of conceptual autonomy among different types of nouns can also

be seen in the syntactic and morphological nominalization of clauses that create various types of verbal complements by manipulating syntactic closedness. When carried to completion, these processes take us full circle, creating a conceptually autonomous expression from a previously dependent one.

2. Conceptual autonomy and closedness

Whatever else nouns across languages have in common, their semantic core or prototypical meaning is the designation of an object or a class of objects. A key feature of prototypical objects noted by Langacker (1991: 14) is that they are *conceptually autonomous* – that is, they exist on their own and can be conceptualized independently of other entities. On the other hand, interactions or relations, the prototypical semantic domain of verbs and adjectives, are *conceptually dependent* in that they can not be conceived of independently of the entities (prototypically objects) that participate in them. Because of this conceptual dependency, verbs and adjectives ordinarily require the elaboration of other subcomponents of their semantic profile in order to be realized in linguistic expressions; nouns, on the other hand, typically do not. In this sense, nouns as linguistic expressions can be said to be *closed* entities whereas verbs, which require syntactic actants, are *non-closed*. It is this non-closedness which has led to the widespread analogy in formal linguistic theories between the semantic structure of verbs and the structure of mathematical functions and logical predicates.

The difficulty with trying to equate linguistically predicative (that is, non-closed) elements with predicates in formal logic is that the latter distinction is an absolute, structural one which brooks no intermediate or peripheral cases, whereas the former distinction – like many phenomena in natural language – seems to be a gradient. Thus, once we stray outside the core domains of prototypical closed and non-closed or predicative meanings (THINGS and RELATIONS, respectively), we find that there are words which display varying degrees of closedness and whose meanings express various degrees of conceptual autonomy. Speakers of particular languages (or, more accurately, speech communities) must "decide" how to treat such words and establish norms of usage. The most generalized of these norms are encoded categorically in the mental lexicon and modeled by linguists as parts-of-speech distinctions. Meanings peripheral to the core domains are grouped into special sub-classes of one or the

other major parts of speech and/or exhibit potential for cross-classification. One familiar type of border-line expression is that designating meteorological phenomena. Meanings like 'rain' are notoriously variable across languages in terms of whether they are expressed as (or, more precisely, whether their most basic expression is) a verb (e.g. Sp. *llover*) or a noun (Rus. *dožd'*). Semantically, 'rain' possesses many of the prototypical properties of verbs: it designates an event and a process which is temporally unstable and aspectually quantifiable. Rain has duration, temporal boundaries, and many of the other attributes of an event or an action. However, where prototypically verbs are non-closed entities that require (minimally) the elaboration of their primary figure or trajector, 'rain' lacks a clearly identifiable, individuable trajector (a "rainer"); languages that realize 'rain' as a verb thus resort to a zero subject (Sp. *llueve* 'it's raining') or an expletive pronoun (Eng. *it's raining*) to use these expressions in grammatical sentences (for a discussion of this type of trajector in another context, see Smith 1994).

On the other hand, languages that express 'rain' as a noun frequently have idiomatic verbal expressions (Rus. *idjot dožd'* 'it's raining' – lit. 'rain goes') used to designate the event (as opposed to the phenomenon) and to express the aspectual and quantificational meanings typical of events. Still other languages make use of expressions in which personified elements serve as the trajector. In Upper Necaxa Totonac, for instance, 'rain' is expressed as *min šk:n*, literally 'water comes'. Thus, the word for 'rain' is the noun expressing its physical component, *šk:n* 'water', the word for 'wind' is *ú:n̰i* 'air', and so on. These nouns only express meteorological phenomena when they appear in an actor-like role as the subjects of verbs such as *min* 'come'; they are also frequently used in desiderative (*minkutún šk:n* 'it looks like rain' – lit. 'water wants to come') and other expressions which imply a certain degree of personification. This last observation holds for some languages where meteorological phenomena themselves are verbs, such as Spanish (*quiere llover* 'it looks like rain' – lit. 'wants to rain') and some dialects of English (*it's wanting to rain*). Like the Upper Necaxa weather terms, such expressions may represent the metaphorical personification of some kind of elemental or environmental trajector in order to make these terms more like other semantic RELATIONS – that is, to give them actor-like trajectors, however atypical. Meteorological phenomena, then, show cross-linguistic variation in their lexical classification due to the fact that they are in a sense intermediate in terms of their conceptual autonomy.[2] Because they have many of the prototypical semantic properties of actions (prototypical verbs) but lack

a prototypical actor, languages may differ as to which side of the noun – verb distinction they fall on.

Nonetheless, in spite of the fact that meteorological terms show intermediate degrees of conceptual autonomy, individual languages do make categorial decisions as to their lexical classification. However, the fact that different languages make different choices about which part of speech these terms belong to confirms the prediction made by prototype theory that it is precisely such intermediate domains that should be the loci of cross-linguistic variation. The same prediction is borne out by other non-prototypical members of lexical classes, giving us important insights into the principles behind the over-all organization of the lexicon. Universally, languages appear to divide the lexicon between prototypical conceptually autonomous entities (THINGS) on the one hand and conceptually dependent meanings (RELATIONS) on the other; this distinction, lexicalized as a distinction between nouns and verbs, forms the basis of the minimal (open-class) parts-of-speech system attested in natural language (Beck 2002).[3] Individual languages then divide the remaining peripheral meanings into new classes (e. g. adjectives) or between the two existing ones. These principles allow us to account for the cross-linguistic variation in morphosyntactic behaviour of a number of non-prototypical members of the major parts of speech discussed below, including HUMAN CHARACTERISTICS (Section 2.1), inherently and inalienably possessed nouns (Section 2.2), and deverbal nouns (Section 2.3).

2.1. HUMAN CHARACTERISTICS

HUMAN CHARACTERISTICS are words which refer to inherent, definitive qualities of human beings such as age (*old*, *young*), disability (*blind*, *lame*), or some other characteristic which is felt to single out an individual as a member of an identifiable class of people. Such words seem to vascillate – both within and across languages – between the classes of noun and adjective/verb. In English, words like *old* and *blind* are clearly adjectival, although in the plural they allow some recategorization and may refer to the class of people to whom that particular characteristic belongs (*the old*, *the blind*). Spanish HUMAN CHARACTERISTICS such as *viejo* 'old' or *cojo* 'lame', on the other hand, are amenable to similar treatment in the singular and become fully recategorized as nouns referring to individuals possessing the property in question.[4] Such expressions allow the full range

of nominal inflectional and derivational possibilities, including pluralization (*el viejo* > *los viejos*) and derivation to show sex (*el viejo* : *la vieja*). The syntactic possibilities open to HUMAN CHARACTERISTICS include use as actants and heads of modified NPs (*el viejo chocho* 'the senile old man', *la vieja chocha* 'the senile old woman'). These words are also unmarked modifiers of nouns themselves (*el maestro viejo* 'the old male teacher'), show agreement for gender and number with their nominal heads (*las maestras viejas* 'the old female teachers'), and can enter into comparative constructions (*ella es más vieja que yo* 'she is older than me'). Indeed, HUMAN CHARACTERISTIC terms in Spanish show such thorough recategorization that it is difficult to ascertain which of the two uses of *viejo* is more basic or least marked – or if in fact there are two lexemes, *viejo*$_{\text{ADJ}}$ and *viejo*$_{\text{N}}$, neither of which is more basic than the other. There are, however, two features of Spanish HUMAN CHARACTERISTICS that do seem to suggest that these are still basically adjectives that have been recategorized as nouns. The first is the reluctance of such words to appear in possessive constructions: with the exception of *mi viejo* 'my old man' (i.e. 'my husband'), constructions such as ?*mi cojo* 'my lame person' or ?*mi ciego* 'my blind person' are highly marked and acceptable only in extremely limited contexts (e. g. when used as vocatives). Additionally, when used as modifiers, HUMAN CHARACTERISTICS are not restricted to attributing properties to humans – *el carro viejo* 'the old car', *fe ciega* 'blind faith' – and may be used to modify any noun which is semantically amenable to possessing the property in question. Used as nouns, on the other hand, such words refer uniquely and consistently to human beings, which suggests that these uses are the result of a process of lexical conversion that adds the notion of 'person' to the profile of the adjective and creates a conceptually autonomous entity.

The opposite type of recategorization applies in Upper Necaxa Totonac, where HUMAN CHARACTERISTICS seem basically to be nouns referring to people. These words allow partial recategorization as adjectives in order to modify nouns that refer to people and animals, but may not be used to modify inanimate objects. The Upper Necaxa age terms *ʔawáča̰* 'young person' and *ʔoːlú* 'old person' and words referring to human deficiencies or physical handicaps such as *aʔa̰táːp 'deaf person', ʔóʔo̰ 'mute person',* and *ɬkiːít 'lazy person'* behave syntactically like nouns referring to humans with the characteristics they denote. This is seen in (2) which shows the HUMAN CHARACTERISTIC *ɬkiːít* 'lazy person' in a number of diagnostic frames which differentiate it from the true adjective *ʔá̰ɬa̰ 'big':*

Upper Necaxa

(2) a. *ik-la̰ʔcíł łki:ít*
1SG-see:CMP lazy
'I saw the lazy one'

b. **ik-la̰ʔcíł ʔá̰ła̰*
1SG-see:CMP big
*'I saw the big one'

c. *cex łki:ít*
good lazy
'good lazy fellow'

d. **cex ʔá̰ła̰*
good big
*'good big one'

e. *łki:ít*
1PO-lazy
'my lazy fellow'

f. **ki-ʔá̰ła̰*
1PO-big
*'my big one'

As we see here, words like *łki:ít* act as unmarked actants (2 a), are modifiable (2 c), and are possessable (2 e), while adjectives like *ʔa̰ła̰* are not ((2 b), (d), and (f)). This seems to indicate that they represent, rather than semantic RELATIONS, semantic THINGS referring to discrete physical objects (in this case, people). While Upper Necaxa does, under certain circumstances, allow the extended anaphoric use of adjectives as actants, even in these cases they remain unmodifiable and can not take possessive markers. Thus, it is unlikely that the examples of nominal uses of *łki:ít* in (2) represent the recategorization of a word that is basically the expression of a semantic RELATION; instead, HUMAN CHARACTERISTICS seem inherently to express kinds of people possessing a specific characteristic. However, as human beings, these people also have and can be attributed other characteristics (hence, their modifiability) and can be possessed.

One place where Upper Necaxa HUMAN CHARACTERISTICS do differ from ordinary nouns is in their use as modifiers. Constructions such as those in (3) are commonplace:

Upper Necaxa

(3) a. *a̰ʔa̰tá:p čiškú*
deaf man
'deaf man'

b. *ɬki:ít puská:t*
lazy woman
'lazy woman'

c. *ʔawáča̰ čiškú*
young man
'young man'

d. *cewa̰ní cumaxát*
pretty girl
'pretty girl'

e. **ɬtukíta̰ kúšḭ* : **kúšḭ ɬtukíta̰*
atole corn : corn atole
*'corn atole' : *'corn atole'

In these examples, words denoting HUMAN CHARACTERISTICS appear as modifiers of nouns, just as they might if they were adjectives like *cewaní* in (3 d); ordinary nouns, however, are not eligible for this role, as shown in (3 e). As modifiers of nouns, HUMAN CHARACTERISTICS seem to qualify as adjectives, just as they seem to qualify as nouns based on their behaviour as syntactic actants; however, given the fact that HUMAN CHARACTERISTICS have so many nominal morphosyntactic properties, it is more likely that their attributive uses shown in (3) are extended uses. This seems especially plausible in that HUMAN CHARACTERISTICS in Upper Necaxa, unlike the same class of words in Spanish, can be used only to modify humans and certain animals, indicating the persistence of the notion of 'person' (or 'personified being') in their profile.

When used as actants in ordinary speech, HUMAN CHARACTERISTICS profile human individuals who, in addition to their age, are expected to have certain concomitant properties as well – thus, in this use they conform to Wierzbicka's (1986) notion of a semantic *kind*. Thus, a person denoted in Upper Necaxa as *ʔo:lú* 'old person' may be assumed to have other characteristics associated with advanced age. The term may well carry with it connotations of wisdom, possession of traditional knowledge, or lack of physical strength – or, depending on the person it is applied to, it may not. However, because only a single property of such

terms serves to identify their trajector, they are easily amenable to recategorization as relational entities attributing that property to an unspecified (human) trajector. When used as modifiers, they tend to lose the additional properties attributed to their referent – that is, *ʔolːú čîšḵú* 'old man' ≠ *ʔoːlú* 'old person, elder'. Such alternations involve a minimal shift in profile and so are frequently attested, both intra- and cross-linguistically. In Totonac, meanings such as 'aged', 'lazy', and 'mute' – properties typical of persons – are expressed as nouns in that they profile the person these properties are predicated of, and so they are treated as conceptually autonomous. In languages like English, on the other hand, the basic meaning of the words *deaf*, *lazy*, and *mute* are the properties themselves and include only the schematic notion of the individual the properties are attributed to (their trajector). These words require the elaboration of this trajector and so, being conceptually dependent and nonclosed, belong to the class of adjectives. Note that in English the possibility of recategorizing many words denoting HUMAN CHARACTERISTICS exists where it does not for other adjectives – hence, we can speak of *the blind* or *the lame*, but not **the soft* or **the wet*. Thus, while English, Spanish, and Upper Necaxa differ in the way words denoting HUMAN CHARACTERISTICS are classified in the lexicon, they agree as to their potential for recategorization, good evidence for the inherent variability of this category on the boundary between prototypical meanings for verbs, adjectives, and nouns.

2.2. Inherent and inalienable possession

Like HUMAN CHARACTERISTICS, words expressing degrees of kinship and bodyparts – often referred to as relational nouns (RNs) – show crosslinguistic variability in morphosyntactic behaviour and lexical class membership. In a few languages, words that correspond to a particular class of RNs in English and many other languages, kinship terms, are, at least optionally, lexically verbs (Evans 2000).[5] More commonly, however, RNs are realized as nouns but exhibit special properties with respect to the expression of their possessors, resulting in systems of *inherent* or *inalienable* possession. Inalienable possession refers to a grammatical system that uses a special paradigm of possessive morphemes for the possessors of certain RNs, whereas inherent possession is a system that requires RNs always to appear with a possessive morpheme. The nouns to which inalienable and inherent possession apply are singled out for special

treatment because they are, like prototypical semantic RELATIONS, conceptually dependent – and, therefore, are non-prototypical semantic THINGS.

An example of a language with a system of inalienable possession is the West African language Mandinka, where kinship terms and bodyparts are inflected for possession using a special paradigm of possessive prefixes:

	Mandinka				
(4)	*dímùsò*	'daughter'	>	*ndímùsò*	'my daughter'
	fáamà	'father'	>	*mfáama*	'my father'
	kútìŋà	'hair'	>	*ɲkútìŋà*	'my hair'
	wùlóò	'dog'	>	*nawùlóò*	'my dog'
	daadeŋ	'animal'	>	*nadaadeŋ*	'my animal'

In the first three examples, the first-person inalienable possessive prefix is shown affixed directly to the noun stem and assimilating in place of articulation to the first consonant of the word; in the last two examples, the first-person alienable possessive prefix, *na-*, appears on words other than kinship terms and bodyparts. Mandinka, like many languages, thus expresses a distinction between those objects which are ordinarily possessed because of ownership, etc., and those which are inalienably possessed because they are inherently relational (kinship terms) or are in a part-whole relation with their possessor (bodyparts).[6]

Inherent possession is illustrated by Upper Necaxa Totonac, which has a class of nouns that can not be expressed without overt marking for a possessor. These nouns for the most part also belong to the classes of kinship terms and bodyparts. Consider the following examples (words in citation form bear the third-person possessive *iš-*):[7]

	Upper Necaxa	
(5)	*išna:ná*	'his/her grandmother'
	išnapa:skín	'her sister-in-law'
	iša̰ʔa̰lo̰ʔót	'its horn'
	iščḛʔé:n	'his/her/its leg'

Unlike Mandinka, the possessive paradigm for ordinary items and for inherently possessed nouns in Upper Necaxa is the same, but the latter are always realized by speakers with one of the possessive prefixes (and are generally rejected as ungrammatical if they are offered without them).

In addition to kinship terms and bodyparts, inherently possessed nouns in Upper Necaxa also subsume a variety of other items, including expressions of part-whole relations:

	<u>Upper Necaxa</u>	
(6)	*išʔósnḭ*	‘its point, tip, protruding portion’
	ištampín	‘its base, lower part, underside’
	ištampún	‘the bottom of something deep (cup, pot, water, etc.)’

There are also a number of other inherently possessed nouns referring to things which can not exist in the absence of their possessor or which are culturally important or salient as possessions:

	<u>Upper Necaxa</u>	
(7)	*išli:má:n*	‘oneself’
	ištapáɬ	‘its price, value’
	išlakamacát	‘his/her plain, salted tortilla’

The last item on the list refers to one of the basic food items in the Totonac diet, typically carried by men to eat while working in the fields. Cross-linguistic variation in the membership of the class of inherently (and inalienably) possessed items is well-attested, particularly when we stray outside of the core area of kinship terms and bodyparts (Koptjevskaya-Tamm, 2001).

The important point about inherently and inalienably possessed nouns is that while they clearly designate discrete objects and so qualify as good members of the class of semantic THINGS, they also have within their meanings a very salient landmark acting as what Langacker refers to as a cognitive reference-point (Langacker 1993). This is clearest in kinship terms. Like ordinary nouns, kinship terms designate discrete objects (people), but because they are always defined with respect to some other person as a point of reference, their meaning naturally entails the existence of that other person on which they are conceptually dependent. Thus, the word *husband* entails the existence of a wife and its meaning would necessarily make inherent reference to a person corresponding to the woman to whom the man designated by *husband* is married. Similarly, *hands* have humans (or primates, anyway) to which they are attached and, in Upper Necaxa, *išlakamacát* ‘plain salted tortillas’ have owners. Languages that have a system of inherent possession treat such landmarks as individuable entities which are *profiled* (that is, are given special

prominence) as part of the meaning of the noun, and so require their elaboration as possessors. On the other hand, languages that don't have inherent possession treat an RN's landmark simply as another component of the word's meaning rather than as an individuable entity profiled by the noun whose identity must be specified in semantic and syntactic structures.

Languages that have a system of inalienable possession recognize the special status of the landmarks of RNs by expressing them with a dedicated set of possessive markers. This can lead to contrastive uses of alienable and inalienable possessive markers, as in (8):

Hawaiian

(8) a. *ke ki?i a pua*
ART picture ALN:PO Pua
'Pua's picture' (owned or painted by Pua)

b. *ke ki?i o pua*
ART picture IALN:PO Pua
'Pua's picture' (a picture of Pua)

c. *na iwi a pua*
ART bone ALN:PO Pua
'Pua's bones' (that Pua eats, cooks)

d. *na iwi o pua*
ART bone IALN:PO Pua
'Pua's bones' (bones in Pua's body)
(Trask 1993: 136–137)

Each of these examples presents a pair of sentences whose English glosses are identical. However, the first sentence in each pair makes use of the alienable possessive marker *a*, indicating that the following NP expresses an ordinary possessor which is not a landmark of the possessed. In the second sentence of each pair, the inalienable possessive marker *o* indicates the opposite, that the following NP is an elaboration of a landmark of the possessed RN and is thus the expression of some entity entailed by that noun's meaning.

Typological variation in the treatment of the schematic entity in the semantic structure of RNs seems to boil down to a distinction between two types of landmark showing qualitatively different morphosyntactic behaviour. As noted previously in Beck (2000), the prototypical nominal or clausal landmark, such as the nominal object of a transitive verb (*the*

boy saw <u>*the pitbull*</u>), represents a discrete, individuable entity which can (and must) be fully elaborated without recourse to additional morphosyntactic machinery. Many linguistic expressions, however, contain another type of landmark which does not, in and of itself, represent an individuable entity but instead represents a schematic or abstract element whose expression in the clause requires the application of non-inflectional, meaning-bearing elements. I will refer to this type of landmark as a *classificatory landmark*.[8] Classificatory landmarks (CLMs) include not only reference-points, but may also include the verbal-classificatory elements found in certain languages, as well as schematic "nominals" inherent in the verb's semantic profile. Consider the examples in (9):

<u>Upper Necaxa</u>
(9) a. *ka̰-mak-sḭ́t-a* *ʔaɬwáʔ*
PL:OBJ-CLS-peel-IMPF egg
's/he peels the eggs'

<u>Bella Coola</u>
b. *˙ʔaλ'a-yuks-aw* *x-a-saƙa-w-c*
canoe:make-PLURAL-3PL PR-D-canoe-3PL-D
'they were building their own canoes'
(Davis and Saunders 1980: 183, line 91)

In (9 a), the verbal classifier *mak-* 'body' indicates the presence of a round object in the profile of the (lexicalized) stem *maksít-* 'peel something round'. The nominal element inherent in the profile of words like *ʔaλ'a* 'canoe-make' in (9 b), rather than being an event-participant, defines the meaning of the verb stem by establishing a particular relation between the trajector and a particular type of object whose individual identity is not profiled. Elaboration of this object is possible in cases such as that in (9 b), where the canoe's specific characteristics – here, ownership – require expression, but only through the use of further morphosyntactic measures (specifically, the preposition *x-*). Such measures, as well as the fact that *ʔaλ'a* appears quite contentedly in sentences without the elaboration of 'canoe', can be taken as diagnostic of the schematic nature of the nominal landmark contained within the meaning of the verb.[9]

Returning to RNs, the distinction between inalienably, inherently, and ordinarily possessed nouns can be treated as a gradient difference between the construal of the salient "nominal" entity in the noun's meaning as a canonical or as a classificatory landmark. If the possessor is construed as a CLM, it requires the use of additional morphosyntactic mea-

sures – the alienable/ordinary possessive construction – in those contexts where its elaboration is needed. Inalienable possession requires that the CLM's status as an inherent part of the profile of the RN (and the nominal's relatively higher degree of conceptual dependency) be recognized through the use of a special possessive paradigm. On the other hand, inherent possession treats the possessor of an RN as a profiled, canonical landmark and requires its elaboration through inflectional or syntactic means. Inherently and inalienably possessed nouns, then, represent interesting hybrids of prototypically nominal and verbal properties. While on the one hand they are the expressions of discrete entities which have independent physical existence, they are not entirely autonomous in that they depend conceptually on some other entity, of which they are a part or with respect to which they are defined. As a result, in languages that have systems of inherent possession, RNs are treated as non-closed and require the realization of a possessor just as a verb (the prototypical expression of a non-autonomous, non-closed entity) requires the elaboration of its arguments. Languages thus seem to form a morphosyntactic cline running from systems of the English type where the CLMs of RNs are accorded no special status, through languages like Hawaiian and Mandinka where their special status is recognized by the use of a dedicated set of (optional) possessive constructions, to Upper Necaxa, where the possessors of such nouns are profiled landmarks and become obligatorily elaborated expressions of fully individuable entities.

2.3. Deverbal nouns

Classificatory landmarks and conceptual autonomy also come into play in the analysis of deverbal nominals such as *explosion* or *(an)attack*. Verbs such as *(to)attack* are clearly the expressions of non-autonomous semantic RELATIONS in that their profiles contain trajectors and landmarks which must be elaborated (or suppressed, as in *to attack*) to allow for the use of these words in a clause. Because of this, deverbal nouns such as *(an)attack* resemble semantic RELATIONS in that their meaning implies the existence of an attacker and a target of the attack, either or both of which can be expressed, as in *Sally's attack on Bill* or *the attack by the Slovenian Army on the village*. Unlike the verb *(to)attack*, however, the noun *(an)attack* can be treated as the expression of an autonomous meaning and is closed in that it can appear in sentences without the elaboration of any of the entities profiled by the verb *(to)attack* – e. g.

There have been a number of attacks in this area, *An attack of this type is extremely risky*. In neither case is the identity of the attacker or the target necessarily recoverable from context. Semantically, they are represented only schematically, the fact that there is an attacker and a target being implied by the meaning of *(an)attack* in the same way that the existence of a tapered object of some kind is implied by the word *point* in *He pricked himself with the point*. The meaning of the word *point* can thus be argued to have a CLM (significantly, in Upper Necaxa *išʔiósnḭ* ‘point, tip, protruding portion’ belongs to the class of inherently possessed nouns). Similarly, *(an)attack* can be said to have classificatory landmarks corresponding to the canonical arguments of the verb *(to)attack*. And, just as the CLMs of words like *point* require further measures for their elaboration (*the point of the needle*, *the needle's point*), so do the implicit arguments of deverbal nouns like *(an)attack* (*Sally's attack on Bill*).[10]

Grimshaw (1991) uses this type of argumentation to draw a distinction between English nominalizations that have “event-structure” (and hence represent an actual event and include actors, realized as arguments) and nominalizations which do not. Consider the deverbal nouns in (10):

(10) a. *The frequent expression of one's feelings is desirable.*
b. *The constant assignment of unsolvable problems…*
c. *The instructor's examination of the papers…*
(Grimshaw 1991: 50–51)

Grimshaw (1991: 49–52) argues that because the nominalizations in (10) have event structure, they must also have argument structure and, hence, obligatorily take *of*-phrase objects, whereas the nouns in (11) do not:

(11) a. *The expression is desirable.*
b. *The assignment is to be avoided.*
c. *The examination took a long time.*
(Grimshaw 1991: 50–51)

The extent to which the objects in (10) are obligatory, however, is highly questionable, and the differing degrees of grammaticality of deverbal nouns with and without elaboration of their arguments noted by Grimshaw seems more likely a function of the felicity of the construction as a whole rather than of the structural properties of the nominalizations themselves:

(12) a. *When it comes to one's feelings, frequent expression is desirable.*

b. *The instructor's examination took forever, but in the end he dealt with all the papers.*

A better analysis of this situation might be that, as *closed* entities, deverbal nouns do not require the expression of their arguments (the trajector and landmarks of the verb-stem) in and of themselves, but the elaboration of these elements may be made necessary by the context in which they are used. In such cases, they require prepositions and other grammatical elements to express the CLMs contained within their profiles. Deverbal nouns, then, can be said in some sense to retain the "event-structure" (that is, the profiled processual relation) of their verbal base, but at the same time they take on the nominal properties of closedness and conceptual autonomy, the latter of which can be shown to vary somewhat (as in the examples in (10)) depending on the compositional properties of the construction in which the deverbal nouns appear.

This approach gives us an effective way of dealing with a variety of nominalization processes, which can be seen not only as a process of *conceptual reification* − the suspension of sequential scanning of an event (Langacker 1987 a: 145) − but also as involving a shift in the semantic status of entities entailed by a word's meaning from classificatory to profiled landmarks. This allows us to handle situations where we have differing degrees of nominalization, as in the famous pair *the army's destruction of the city*, where all of the arguments of the nominalized verb have become schematic CLMs (that is, they are optionally expressed and require further morphosyntactic measures for their expression), and *the army's destroying the city*, where only the agent is schematic. Most importantly, however, it allows us to salvage the distinction between RELATIONS and THINGS as the key semantic distinction between verbs and nouns.

By refining our notion of a prototypical semantic RELATION to include only those meanings which profile individuable, canonical landmarks, we can exclude meanings with CLMs − that is, landmarks that are not obligatorily elaborated entities in the word's profile. Such meanings become peripheral members of the class of semantic THINGS. This distinction illustrates very neatly the advantage of using an approach such as Cognitive Grammar that allows us to appeal to shifts of profile and differences in construal to model the cross- and intra-linguistic distinctions between cross-class minimal pairs such as *(to)attack* > *(an)attack*: a purely formal, logic-based approach would require us to treat both words as the expressions of logical predicates, just as it requires us to treat RNs such as *father* as the expressions of logical predicates, although lexically

they are indisputable nouns. A cognitive approach allows for the inherent relationality of both expressions and accounts for the fact that relational and deverbal nouns pattern with the expressions of more prototypical semantic THINGS in terms of differences in profiling. The verb *(to)attack* profiles its trajector and its landmark as individuable entities, requiring their elaboration, and is therefore lexicalized as a verb; the noun *(an)attack* entails the same event-participants but treats them as inherently schematic and so does not require their elaboration, thereby becoming a more conceptually autonomous, closed entity classified lexically as a noun.

3. Salamanders and circular scales

As we have seen, the notions of prototypicality and conceptual autonomy play a key role in the analysis of cross-linguistic variation in the two major parts-of-speech, nouns and verbs, and their role as key factors in predicting the domains of cross-linguistic variability finds support in a number of salient phenomena. Relatively less autonomous expressions such as HUMAN CHARACTERISTICS – which, in addition to predicating a specific property, include in their profile a schematic (human) entity with respect to which that property is predicated – are one such locus of variation. In languages where HUMAN CHARACTERISTICS are basically adjectives, the inherent human landmark is treated as a profiled trajector and the meaning is, consequently, a syntactically non-closed expression; in languages where HUMAN CHARACTERISTICS are nouns, the schematic human landmark is the profile determinant, causing the meaning to be treated as the expression of a person possessing a particular property – and, hence, as a conceptually autonomous noun. Similarly, relational nouns vary across languages in terms of the syntactic treatment of their inherent landmarks, typically expressed as possessors. Languages with systems of inalienable possession distinguish between possessors which are elaborations of classificatory landmarks entailed by the meaning of the possessed noun and those possessors which bear no intrinsic relation to it. Languages with systems of inherent possession, on the other hand, treat the possessors of RNs as profiled landmarks and require their elaboration; RNs in these languages thus become non-closed entities. The distinction between classificatory and profiled landmarks (and the consequent variation in conceptual autonomy) is also seen intra-linguistically in processes of deverbal nominalization which (among other things) serve

to shift the status of entities profiled by the verb to that of CLMs which are not obligatorily elaborated during sentence composition and which require the addition of further meaning-bearing elements to be so realized. All three of these types of word – HUMAN CHARACTERISTICS, RNs, and deverbal nominalizations – represent intermediate degrees of conceptual autonomy in that they include in their meanings other "nominal" elements and, as a result, languages vary with respect to their lexical (sub-)classification and their degree of morphosyntactic closedness.

Another cross-linguistic pattern that our analysis has implications for is the consistently nominal character of subordinate clauses, which in many languages show overlapping distribution with nouns. Like prototypical nouns, full clauses are closed in the sense that their valency is "saturated" – that is, they have elaborated all of the profiled elements in their meanings and their unfilled syntactic valency is zero. As a result, full clauses are amenable to distributional treatment as nouns. In languages like English, finite clauses serve as actants of verbs – often, but not always, requiring the use of a complementizer (e. g. *I know that/Ø she came here yesterday*). Other languages nominalize full, syntactically-saturated clauses morphologically when used as actants, as in the Bella Coola example in (13):

Bella Coola
(13) *wic ʔac wa-***s***-ʔaɬps-tu-m* q^wax^w
be this D-NOM-eat-CS-3SG:PASS raven
'what Raven is/was fed [is/was] this'
(Nater 1984: 102)

In (13), the syntactic subject of the sentence is an intransitive (passive) clause which contains the elaboration of its single actant, q^wax^w 'Raven'. The clause thus has saturated its valency and is closed syntactically. When such clauses are used as actants, they require the nominalizing prefix, *s-*, also used in the creation of deverbal nouns (Beck, 2000).

Significantly, the use of non-saturated (typically non-finite) clauses as actants in many languages seems to involve the application of some morphosyntactic process which suppresses the elaboration of one or more of the "nominal" entities in the verbal profile – or, more accurately, changes these from individuable, potentially elaborable entities, to classificatory landmarks. Clause-level nominalization thus seems to be one extreme of a set of syntactic processes that manipulate the closedness of words expressing semantic RELATIONS. Ironically, this analysis draws a

strong parallel (well-attested across languages) between the simplest (conceptually autonomous, closed entities expressed as nouns) and the most complex (syntactically elaborated finite clauses) components of syntactic structure, creating as it were a circular scale of complexity running from simple, non-closed lexical items through various types of infinitive, gerund, and participle (partially closed nominalizations) to nominalized or subordinated finite clauses which are closed via syntactic processes during sentence composition. Pursuit of this idea is, unfortunately, beyond the scope of this paper, but without a doubt is a promising avenue for further investigation.

Notes

1. Thanks are due to Gene Casad, Jack Chambers, Elan Dresher, Alana Johns, Jean-Pierre Koenig, Paulette Levy, and Gary Palmer, who are not responsible for my errors, and to Igor Mel'čuk, who is at least partially responsible for my errors developing into these ideas. Data from Upper Necaxa Totonac are drawn from notes made in the field in the autumn of 1998 and the spring of 1999 on a project supported by the Organization of American States, the Social Sciences and Humanities Research Council of Canada, and the University of Toronto. Special thanks go to my consultants – particularly Porfirio Sampayo and Longino Barragán, who worked on this topic with me – and to the people of Chicontla and Patla, Puebla, Mexico, for their friendship and hospitality. The Mandinka data are courtesy of Lamin Jabbi. The abbreviations used in this paper are: ALN = alienable; ART = article; CMP = completive; CLS = classifier; CS = causative; D = deictic; IMPF = imperfective; INALN = inalienable; NEG = negative; NOM = nominalizer; PASS = passive; PL = plural; PO = possessive; PR = preposition; RN = relational noun; SG = singular.
2. Gene Casad (p. c.) points out that many languages show intra-linguistic variation on this score as well. This gives us the contrast between the two Cora sentences in (i) and (ii):

   (i) *ka=mú yá háʔawaʔa ɨ́ vi:te*
   NEG=they here be:located ART rain
   'the rains were nowhere to be found'

   (ii) *me-ví:ye héiwa*
   they-rain lots
   'it is really raining hard'

   These sentences seem to me to follow the same cognitive principles outlined for cross-linguistic variation above: in (i) the "rains" are construed as a con-

ceptually autonomous, tangible element (water falling from the sky), expressed as a noun, while (ii) is an expression of processual intensity and so construes "rain" as a process and lexicalizes it as a verb.

3. Another option is that a language makes no distinction between classes of autonomous and non-autonomous entities at all – that is, that it fails to distinguish nouns from verbs. There are a number of claims to this effect in the literature for several languages, most notably Salishan (e. g. Kinkade 1983), Tongan (Broschart 1997), and Tuscarora (Sasse 1993). While arguments have been raised against this position for Salishan (e. g. Jacobsen 1979; van Eijk and Hess 1986; Beck 1995) and for Tongan and Tuscarora (Beck 2002; Croft 2000; Mithun 2000), it will have to be admitted as a typological possibility until the matter has been definitively resolved.
4. These are distinct from elliptical constructions such as *el rojo* 'the red one', which presuppose some indeterminate nominal element whose identity is recoverable from discourse.
5. Because the details of this phenomenon are somewhat tangential to the present task (and would take me well beyond my allotted space), the interested reader is referred to Evans' excellent survey and typological discussion. The facts presented by Evans, particularly with respect to cross-linguistic patterns of grammaticalization, seem highly congruent with the points being argued here.
6. The fact that the inalienable possessive marker is almost always more closely bound morphosyntactically to the possessed is frequently cited as an example of iconicity – morphosyntactic relatedness being proportional to semantic relatedness (see Haiman 1980).
7. Totonacan languages make use of head-marking possessive constructions, meaning that an expression like *Manuel's aunt* would take the form *išnap Manuel*, the possessive-marker appearing on the possessed rather than the possessor.
8. Beck (2000) uses the term *relational landmark* for this purpose – that is, as a means of designating a non-individuable entity used to establish a relation within some element's profile. I have opted for the new term here to avoid confusion with Langacker's (1991) use of *relational landmark* to refer to a landmark that is in itself a RELATION rather than a THING.
9. This is, of course, oversimplifying things a bit, but a more rigorous discussion of these issues (particularly what does or does not constitute a further measure – on this, see Beck 2000) will have to be left for the future.
10. There is a tendency in the literature to disregard as meaningless the prepositions used to realize the arguments of nominalized verbs. This, however, seems clearly to be in error given the numerous semantic distinctions that these prepositions encode:

    (i) a. *the attack of the army*
        b. *the attack by the army*

c. *the attack on the army*
d. *the attack with the army*
e. *the attack for the army*

Aside from (a) and (b) which seem nearly synonymous (but are actually not, as shown by the contrast *There was an attack by the Slovenian army* vs. **There was an attack of the Slovenian army*), these sentences show clear semantic differences in the roles ascribed to the army. Given that they are identical in every other respect, this meaning difference must be ascribed to the presence of the preposition.

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Hawaiian *ʻo* as an indicator of nominal salience[1]

Kenneth William Cook

1. Introduction

Nominal salience plays a significant role in the theory of Cognitive Grammar (Langacker 1987, 1991). Subjects are claimed to be cognitively more salient than direct objects and direct objects more salient than other nominal types. Given that nominal salience plays a part in the grammars of human languages, it is plausible that a language might have a marker that indicates that a nominal is relatively more salient than some other nominal type or other nominals in the same clause. This paper proposes that the Hawaiian preposition *ʻo* is such a marker.

Hawaiian *ʻo* has baffled scholars for as long as the language has been studied. Carter (1996) gives an exhaustive review of the previous analyses of *ʻo*. To summarize his review, various scholars have looked at different uses of *ʻo*, and depending on the set of uses they observed, they analyzed *ʻo* as, among many things, an article (Ruggles 1819), a subject marker (Kahananui and Anthony 1974, Elbert and Pukui 1979), a marker of nominative case (Hopkins 1992), or an emphatic marker (Andrews 1854, Alexander 1864). Carter himself has claimed that there are three distinct morphemes that have the phonological shape of *ʻo*: the topic preposition *ʻo*, the subject preposition *ʻo*, and a copular verb *ʻo*. These three are illustrated in (1 a – c). Carter analyzes the appositive *ʻo,* illustrated in (1 d), as a use of the copular morpheme.[2]

(1) a. *A ʻo wau hoʻi hele akula e mākaʻikaʻi i ke*
and TOP I INT go DIR-ASP INF tour OBJ the
Capitol, …
Capitol
'And as for me, I went off to tour the Capitol, …'
(McGuire 1995: 33) C170[3] (topic)

b. *… kū aʻela ʻo Awakea me kona wela nui …*
stand DIR-ASP SUB Awakea with his heat big
'… Awakea stood up with his intense heat …'
(*Laie i ka Wai* 1918: 176) C197 (subject)

c. *'O ke kāpena nō ke kahuna pule.*
cop the captain indeed the priest prayer
'The priest was the captain.'
(McGuire 1995: 124) C175 (copular)

d. *ame kāna wahine, 'o Kapukini*
and his wife app Kapukini
'and his wife, Kapukini'
(Nakuina 1902: 1) C208 (appositive)

As illustrated by typical transitive clause (2), Hawaiian is an accusative VSO language. Hence predicates, including nominal predicates, such as the one in (1 c), generally precede subjects.

(2) *Kuke ka wahine i ka mea'ai.*
cook the woman obj the food
'The woman cooks the food.'
(Kamanā & Wilson 1990: 66)

Pattern (3 a) shows the relative order in which topics, predicate nominals, and subjects will occur in a given clause (cf. Carter 1996: 217). Sentence (3 b) illustrates this word order and shows that all three of these nominal types can occur in the same clause.

(3) a. topic > predicate nominal > subject

b. *'O ka honua nei, he mea poepoe ia.*
top the earth here a thing round it
'The earth, it is a round substance.'
(Andrews 1854: 136–7) C48

This paper argues that copular *'o* is also a preposition (rather than a verb), specifically one that precedes definite predicate nominals in equational sentences like the one in (1 c).[4] It is also claimed that Carter's three *'o* morphemes can be united under the single rubric of *marker of nominal salience*, a term which is reminiscent of Andrew's and Alexander's emphatic marker.

2. Arguments that *'o* is a copular preposition and not a copular verb

I agree with Carter that one of the values of *'o* is that of some type of copular element; however, Carter claims that it is a copular verb, while I

claim that it is a copular preposition, in other words, a preposition that indicates that the noun that it precedes is a predicate nominal, or in other terminology, a predicate noun or a predicate nominative.[5] Arguments that *ʻo* is not a copular verb involve (among other things) tense/aspect markers, syllable length, nominalizations, postposed phrasal elements, the distribution of the word *ʻano* ʻsomewhatʼ, as well as a comparison with other Polynesian languages. Let us look at these arguments one by one.[6]

2.1. Tense/aspect markers

As illustrated in (4), verbs in Hawaiian can be preceded by tense/aspect markers such as the perfect aspect marker *ua* (Carter 96: 386). In fact, this is Elbert and Pukui's (1979: 43) criterion for verbs. Significantly, *ʻo* is not preceded by tense/aspect markers.

(4) *Ua hele nohoʻi au e holoholo …*
PERF go INT I INF walk
ʻI went for a walk (lit. to walk)…ʼ
(McGuire 1995: 39)

2.2. Syllable length

Content words (including verbs) consist of at least one long syllable or two short syllables in Hawaiian.[7] Consider, for example, *kū* in (1 b) which consists of one long syllable and *hele* ʻgoʼ in (1 a), which consists of two short syllables. *ʻo* consists of only one short syllable. This fact argues against considering it a verb.

2.3. Nominalizations

As illustrated in (5), verbs in Hawaiian are nominalized when followed by the morpheme *ʻana*. Significantly, *ʻo* is not nominalized by *ʻana* (Carter 1996: 387).

(5) *ʻAʻole pau koʻu hele ʻana i ke kula nui.*
not finished my go NOM to the school big
ʻMy going to the university is not over.ʼ
(Hopkins 1992: 185)

2.4. Postposed phrasal elements

Verbs (and nouns) in Hawaiian are followed by a sequence of what Elbert and Pukui (1979: 90–104) call 'postposed phrasal elements,' a category which includes modifiers like *wale* 'just, quite, alone, without reason, reward, pay', directionals such as *mai* 'toward the speaker', tense/aspect markers like *nei* 'past', and the intensifier *nō* 'indeed'. Sentence (6) illustrates the use of these elements. *'O*, as may be expected by now, is not followed by postposed phrasal elements.

(6) *I hele wale mai nei nō wau e ho'ohala*
PERF go only hither PAST indeed I INF while-away
manawa.
time
'I merely came to while away the time.'
(Kahananui and Anthony 1974: 337)

2.5 Distribution of the word *'ano* 'somewhat'

As illustrated in (7), the word *'ano* can precede verbs, and when it does, it means 'somewhat, rather, to show signs of' (Pukui and Elbert 1986: 26). *'Ano* does not precede *'o*. Hence *'o* is not a verb.

(7) *E 'ano ua aku ana.*
IMP show-signs-of rain DIR IMP
'It looks like rain.'
(Pukui and Elbert 1986: 26)

2.6. Comparison within the Polynesian family

The cognates of *'o* in other Polynesian languages have not been analyzed as copular verbs. In fact, as far as I know, no other Polynesian language has been analyzed as having any copular verb. Given this observation and the five arguments concerning *'o*, I conclude that *'o* is not a verb in Hawaiian.

3. Arguments that *'o* is a marker of nominal salience

Having established that copular *'o* is a preposition and not a verb, we now turn to why *'o* in all its uses should be considered a marker of

nominal salience. A nominal in Hawaiian (and presumably in other languages) is salient because of, among other things, its grammatical relation or because of its sentential position. Specifically in Hawaiian, topics and certain subjects and certain predicate nominals are marked *ʻo*. Note that it is not all subjects or all predicate nominals that are marked *ʻo.* These categories are sensitive to the hierarchies in (8) when it comes to *ʻo* marking.

(8) more salient > less salient
a. proper nouns > common nouns
b. definite nouns > indefinite nouns
c. animate entities > inanimate entities

Following Langacker (1991: 305–9), I am assuming that the items on the left in (8) are cognitively more salient than the corresponding items on the right. The first and second items have to do with the speaker's construal of an entity as a proper noun rather than a common noun or as a definite rather than an indefinite noun. The third item, (8 c), involves the inherent nature of the encoded entity, i. e. whether it is animate (more salient) or inanimate (less salient).[8]

3.1. Salience due to grammatical relation

ʻo marks certain subjects, and subjects crosslinguistically are assumed to be highly salient (Langacker 1991: 306–309). In Hawaiian, subjects of embedded clauses tend to be marked *ʻo*. For example, in (9), the postverbal subject of a relative clause is preceded by *ʻo*.

(9) … *kahi i kani ai ʻo ka mea kani*
place PERF sound ANI SUB the thing sound
'the place (where) the instrument sounded.'
(*Laie i ka Wai* 1918: 176) C201

As for the subjects of matrix clauses, *ʻo* precedes subjects that are salient in terms of the hierarchies that are given in (8a and c). To illustrate (8a), generally speaking, proper (but not common) nouns are marked *ʻo* when they are subjects of matrix clauses.[9] Compare (10a and b).

(10) a. … *kū a'ela 'o Awakea me kona wela* nui … (= 1 b)
stand DIR-ASP SUB Awakea with his heat big
'… Awakea stood up with his intense heat …'
(*Laie i ka Wai* 1918: 176) C197 (subject)

b. *Kuke ka wahine i ka mea'ai.* (= 2)
cook the woman OBJ the food
'The woman cooks the food.'
(Kamanā and Wilson 1990: 66)

As for hierarchy (8 c), the third person singular pronoun *ia* is often marked *'o* when it refers to an animate subject but not when it refers to an inanimate subject (Kamanā and Wilson 1977: 46; Hopkins 1992: 16). Consider the contrast in (11 a and b).

(11) a. *Hele ('o) ia i Ka'ū.*
go SUB he to Ka'ū
'He goes to Ka'ū.'
(Kamanā and Wilson 1977: 46)

b. *He mea maika'i ia.*
a thing good it
'It is a good thing.'
(Hopkins 1992: 16)

3.2. Salience due to clausal position

The clause initial position is one of emphasis in Hawaiian. This fact has been recognized by many Hawaiianists (e. g. Elbert and Pukui 1979: 132−133, 172−173), and I would claim that the nouns marked *'o* that occur in that position are so marked because they are salient.

The claim that the clause initial position is one of emphasis is supported by the fact that there are two sentence types that place salient prepositional phrases in sentence-initial position: i. e., actor-emphatic sentences and situation-emphatic sentences (Hopkins 1992: 195, 203), illustrated, respectively in (12 a and b) and (13 a and b). The former focus on actors marked *na* 'by' and the latter on oblique relations like those of time and place.

(12) a. *Na wai i hoʻomākaukau i kēia iʻa maloʻo?*
by who PERF prepare PBJ this fish dry
'Who prepared this dried fish?'
(Hopkins 1992: 195)

b. *Na Lopaka i kaula'i.*
by Lopaka PERF dry
'It was Lopaka who dried it.'
(Hopkins 1992: 195)

(13) a. *I ka hola ʻehia e hāmama ai ka hale ʻaina?*
at the hour how-many IMP open ANA the house meal
'What time will the restaurant open?'
(Hopkins 1992: 203)

b. *Ma Kahaluʻu ʻo ia e hana nei.*
in Kahaluʻu SUB he IMP work now
'Kahaluʻu is where he works.'
(Hopkins 1992: 203)

As can be seen in (12 a) and (13 a), the initial position is also one in which interrogative phrases occur. Since interrogative phrases are generally in focus, that position must be in focus and therefore salient. Another observation can be made based on (12) and (13), and that is that if a sentence-initial nominal is already preceded by some preposition, it is not also preceded by *ʻo*. Hence *ʻo* only marks otherwise unmarked salient nominals, specifically topics, subjects, definite predicate nominals, and appositives.

3.3. Topics

Topics, I would claim, are inherently salient, given that their scope includes at least a whole sentence if not a larger piece of discourse. Of the hierarchies in (8), the only one that topics are sensitive to is the one concerning definiteness, i. e. (8 b). Since the sequence **ʻo he*, i. e. topic marker followed by indefinite article does not occur, we can assume that there are no indefinite topics in Hawaiian.

Another observation concerning the topic *ʻo*, is that it is probably the variant of *ʻo* that marks nominals when they are used in isolation. Consider for example the minidialogue in (14 a and b).

(14) a. *He aha kēnā?*
a what that
'What is that?'
(Kamanā and Wilson 1977: 33)

b. *'O kēia?*
TOP this
'This?'
(Kamanā and Wilson 1977: 33)

3.4. Predicate nominals

As for predicate nominals, in Hawaiian, there are two clause types that involve clause-initial predicate nominals, namely equational clauses like (15 a) and class-inclusion clauses like (15 b).

(15) a. *'O ke kāpena nō ke kahuna pule.* (= 1 c)
COP the captain indeed the priest prayer
'The priest was the captain.'
(McGuire 1995: 124) C175 (equational clause)

b. *He haole kēia …*
a Caucasian this
'This (person) was a Caucasian …'
(McGuire 1995: 39) C145 (class-inclusion clause)

In an equational clause like (15 a), two definite noun phrases are equated, and the first nominal is marked *'o*. However, in a class-inclusion clause like (15 b), the predicate nominal is not marked *'o*. This contrast between the two clause types can be attributed to the difference in definiteness of the predicate nominals. Here the hierarchy in (8 b) comes into play again. Since indefinite nominals are less salient than definite ones, indefinite predicate nominals fail to receive *'o* marking.[10]

3.5. Word order in equational clauses

The word order of class-inclusion clauses like (15 b) is fixed, while the word order of equational clauses is somewhat flexible.[11] In this clause type, there is a tendency for pronouns and proper nouns (as opposed to common nouns) to appear first (Hopkins 1992: 15). See (16 a and b).

Since pronouns and proper nouns are more definite than common nouns, this is another indication, in line with the definiteness hierarchy in (8 b), that the initial position is one of salience.

(16) a. *ʻO au ke kumu.*
COP I the teacher
'I am the teacher.'
(Hopkins 1992: 15)

b. *ʻO Noelani ka haumana.*
COP Noelani the student
'Noelani is the student.'
(Hopkins 1992: 15)

When both nouns in an equational sentence are common, the one that is focused because, for example, it is the answer to a question, is first. See (17 a and b) and (18 a and b). This again indicates that the initial position is one of salience.

(17) a. *ʻO wai kēlā kanaka?*
COP who that man
'Who is that man?'
(Hawkins 1982: 70)

b. *ʻO ke aliʻi kēlā kanaka.*
COP the chief that man
'That man is the chief.'
(Hawkins 1982: 69)

(18) a. *ʻO wai ke aliʻi?*
COP who the chief
'Who is the chief.'
(Hawkins 1982: 70)

b. *ʻO kēlā kanaka ke aliʻi.*
COP that man the chief
'The chief is that man.'
(Hawkins 1982: 70)

Current descriptions of Hawaiian differ as to which nominal in an equational sentence should be considered the subject. Carter (1996: 217), for

example, claims that Hawaiian consistently maintains the word order in (3 a), which rules out the possibility of a subject preceding a predicate nominal in an equational sentence. Cleeland (1994: 75), on the other hand, identifies the *ʻo*-marked nominal in an equational sentence as the subject. My observation is that whichever nominal is in focus will be placed in initial position and marked *ʻo*, whether it is a subject or a predicate nominal. Hence Hawaiian sentence (18 b) corresponds to either 'The chief is *that man*' or '*That man* is the chief,' as long as 'that man' is in focus. The observation that the initial nominal is in focus, whether it is a subject or predicate nominal, jibes with my claim that *ʻo* indicates that a nominal is salient.

4. Appositives

As stated above, Carter (1996: 207) analyzes the appositive use of *ʻo* as an instantiation of copular *ʻo*, and I agree with this part of his analysis. There are three possibilities for appositives in Hawaiian. The appositive is unmarked, is marked *ʻo*, or is preceded by the same preposition as the noun with which it is in apposition (Hawkins 1982: 55). These three possibilities are illustrated in (19 a – c).

(19) a. … *me Keola, kaʻu haumāna*
with Keola my student
'…with Keola, my student'
(Hawkins 1982: 55)

b. … *me Keola, ʻo kaʻu haumāna*
with Keola APP my student
'… with Keola, my student'
(Hawkins 1982: 55)

c. … *me Keola, me kaʻu haumāna*
with Keola with my student
'… with Keola, my student'
(Hawkins 1982: 55)

Under the analysis of appositive *ʻo* as copular, the final phrase in (19 b) is actually a nonrestrictive relative clause which can be glossed 'who is my student,' whereas the final phrases in (19 a and c) are simply apposi-

tive phrases. The appositive *ʻo* in (19 b) is in the salient clause-initial position, thus like other clause-initial predicate nominals, it is marked *ʻo*.

Related to this appositive use is the expression *ʻo ia hoʻi*, discussed at length by Carter (1996: 240–245). This expression is often translated 'namely' or 'that is' and, as pointed out by Hawkins (1982: 147), occurs 'most often in sentences where additional information is given to more fully describe a referent.' See, for example, item (20).[12]

(20)

… *nā*	*kaikūʻono*	*o*	*Ululāʻau,*	*ʻo*	*ia*	*hoʻi,*	*ka*	*inoa*
the	inlets	of	Ululā'au	COP	that	also	the	name

kahiko	*o*	*Lānaʻi*
old	of	Lānaʻi

'… the inlets of Ululāʻau, that is, the old name of Lānaʻi.'
(Hawkins 1982: 147)

The *ʻo* that occurs in the idiomatic use of dual and (rarely) plural pronouns referred to by Kamanā and Wilson as 'pronoun and' (1977: 134, 153–154) is probably also an appositive use of *ʻo*. As illustrated in (21 a and b), this *ʻo* can be replaced by *me* 'with'.

(21) a.

māua	*ʻo/me*	*koʻu*	*kupuna*	*kāne*
we (exc., dual)	APP/with	my	grandparent	male

'my grandfather and me'
(Kamanā and Wilson 1977: 153)

b.

ʻo	*Kimo*	*lāua*	*ʻo/me*	*Kalā*
TOP	Kimo	they (dual)	APP/with	Kalā

'Kimo and Kalā'
(Kamanā and Wilson 1977: 153)

5. Summary and conclusion

As we have seen in section 2, there are several reasons to consider copular *ʻo* to be a preposition and not a verb. There are also several reasons for claiming that all three values of *ʻo* can be united under the rubric of *marker of nominal salience*. First of all, they all mark a nominal that is salient in some way. Subjects of embedded clauses are generally marked *ʻo*, and subjects are assumed to be inherently salient. Among certain matrix subjects, those that are salient because they are animate or proper

receive *ʻo* marking, while those that are not salient because they are inanimate or indefinite are not marked *ʻo*. Definite predicate nominals are marked *ʻo* while indefinite ones are not. Topics and definite predicate nominals occur in the salient clause-initial position and they are marked *ʻo*. Given that *ʻo* is associated with salient subjects and with the salient clause-initial position, it can be said that it is associated with nominals that are either salient because they are salient subjects or because they find themselves in a salient position. Hence *ʻo* marks salient nominals.

Now is this a matter of three distinct morphemes or three variants of the same morpheme? I believe the latter is true for two reasons. One, these three noun types, definite predicate nominals, subjects, and topics are associated one with the other in certain ways. Subjects and topics both typically name the entity about which the sentential predication is made, and some languages (e. g. Latin) use the same case marking, i. e. nominative, for both subjects and predicate nominals.

In Hawaiian there are three other facts that unite these variants of *ʻo*. One, the subject variant and the copular variant are both occasionally instantiated as *ʻa* (rather than *ʻo*) in older texts (Carter 1996: 212−215). Secondly, all three (not just a subset of the three) are occasionally omitted in texts produced by native writers (Carter 1996: 227−230).[13] Thirdly, it is often difficult to tell which variant of *ʻo* one is dealing with (cf. Carter 1996: 229), which would be what one would expect if the three *ʻo*'s are manifestations of the same morpheme. Hence I hereby conclude that the three variants of *ʻo* are manifestations of the same morpheme and that the morpheme *ʻo* marks nominals as cognitively salient.

Notes

1. An earler version of this paper was presented at the Sixth Annual International Conference on Cognitive Linguistics at Stockholm University, July 10−16, 1999. I thank the Japan Society for the Promotion of Science for the fellowship that made the writing of this paper possible and the Institute for the Study of Languages and Cultures of Asia and Africa for hosting me while I was in Tokyo April through August, 1999. I also thank Gary Kahāhoʻomalu Kanada, an instructor of Hawaiian at Hawaii Pacific University, for comments on the abstract of this paper. All errors in this paper, of course, are my own.
2. There are a handful of verbs that also mark their objects with *ʻo* (see Carter 1996: 346−56). Dealing with those verbs is beyond the scope of this paper,

but at this point I suspect that the motivation for this unusual case marking is that the activities expressed by the verbs involved are low in transitivity.

3. I follow Carter in marking vowel length and glottal stops in cited material that does not have diacritics (but not in the Hawaiian titles and names that appear in the reference section). The numbers following capital C's that appear below the example sentences refer to the pages in Carter's thesis upon which the sentences are found. The abbreviations used in the close glosses are ANA: anaphor, APP: appositive, ASP: aspect, COP: copular, DIR: directional, EXC: exclusive, IMP: imperfect, INF: infinitive, INT: intensifier, NOM: nominalizer, OBJ: object, PERF: perfect, SUB: subject, TOP: topic.
4. The equational sentences described in this paper are all affirmative. The accounts of negative equational sentences differ with respect to the word order of the subject and the predicate nominal and in the presence of *ʻo* before the predicate nominal. See, for example, Cleeland (1994: 80), Hopkins (1992: 225), and Kamanā and Wilson (1977: 256).
5. Carter actually uses the term 'copula verb' rather than 'copular verb'.
6. Carter (1996) argues that there are three copular verbs in Hawaiian: *ʻo*, *he* and *i*. In Cook (1999) I argue that these three morphemes are not copular verbs. The arguments presented here are the strongest ones in Cook (1999) concerning *ʻo*. See Cook (1999) for other arguments against the claim that these three morphemes are copular verbs.
7. Carter (1996: 403, endnote 30) credits Albert J. Schütz for this observation concerning syllable length.
8. The hierarchy in (8 c) is a segment of the empathy hierarchy given in (i). The first four items in the hierarchy in (i) are animate entities and the last two are inanimate (cf. Langacker 1991: 306).

   (i) empathy hierarchy: speaker > hearer > human > animal > physical object > abstract entity

9. Locative nouns are also marked *ʻo* when they occur as subjects. In Cook (1997), I have claimed that locative nouns group together with proper place names because they both refer to places. I have also claimed that the treatment of place names and locative nouns like proper names can be related to the Hawaiian cultural importance given to locations.
10. In Cook (1999) I have attributed the lack of *ʻo* before indefinite predicate nominals to a rule which prohibits all prepositions (except *me* 'like') before the indefinite article *he*. In this paper I offer an explanation for why the preposition *ʻo* does not occur before *he*. I have no satisfactory explanation for why *he* does not occur *after* other prepositions except *me*. One historically plausible explanation is that the prohibition on *ʻo* in front of *he* for some reason spread to the other prepositions.
11. In English as well, the two nouns of an equational sentence are often reversible. 'George W. Bush is the president of the United States' can easily be reworded as 'The president of the United States is George W. Bush,' but

'Hillary is a senator' at best sounds poetic when reversed to 'A senator is Hillary.'

12. Some authors, including Cleeland (1994: 418), and Pukui and Elbert (1986: 279) analyze the *'o ia* of this expression as a manifestation of the word *'oia* 'true, really.'
13. Kamanā and Wilson (1990: 27–29) similarly observe that *'o* is obligatorily dropped before the indefinite determiner *he* and optionally dropped before the other articles in conversation.

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Animism exploits linguistic phenomena[1]

Rodolfo R. Barlaan

1. Introduction

The Isnag people are a mountain, slash-and-burn, agriculturalist society. Like many other preliterate societies (Hunter and Phillip 1976), the Isnag culture imposes taboos on various things, places and activities. For one rice is the staple crop of the Isnags and they consider themselves to be suffering a famine if they do not have sufficient rice to carry them through to the next harvest time. They see it this way even though there may be an abundant supply of other food such as edible roots, bananas, and game. To ensure a sufficient supply, they pay the most meticulous attention to rice production. For this reason rice production involves highly intricate rituals throughout the annual cycle of their cultural activities, including an extensive taboo complex. Besides activities, food and things, many basic words in the language become taboo during rice harvest season. Utterance of words designating basic concepts such as "eat", "sleep", "go", "rice", "fire", "rain", "sun", etc. is prohibited. Violation of such taboos will cause the offender significant economic loss, particularly in the yield of his rice field.

This paper discusses two aspects of the taboo words, (a) the cognitive underpinnings of the system and (b) the linguistic processes employed in the derivation of the substitute phonological forms. I begin with an overview of Isnag agriculture.

All agriculture in Isnag is done by hand. Rice production is primarily dependent upon nature for water, sun, and other natural phenomena. The majority of the necessary elements, if not all, are beyond the producer's direct control. However, he does not just relinguish his crop production to fate. He attempts to control these natural phenomena by imposing a taboo restriction on words denoting the natural phenomena (Boas 1938, Levinson 1980, Hoebel 1966), their effects, and attributes perceived to have adverse effects on rice production. This is very crucial during harvest season. The violation of these taboos is said to likely cause the offender a significant economic loss, particularly in the yield of rice in his field. Many of the natural phenomena have negative effects on rice

when it is ready for harvest. Rain would cause the ripe rice to germinate if not harvested right away. Too much sun will cause intense heat that makes harvesting difficult. The harvesters run for shade, thus leaving ripe grains to fall on the ground. Too much wind will flatten the rice stalks to the ground making it hard to harvest. Other elements that affect the yield will be discussed in the following sections.

2. The rice production schema

The rice production schema operates within a more schematic idealized cognitive model (ICM) (Lakoff 187: 68), which in turn operates within yet another more schematic ICM of the Isnag world view. The ICM that serves as the immediate scope of the rice production schema is the following:

> We, Isnags, subsist on rice
> We want to subsist well
> We need sufficient rice

Within this ICM, is an ICM on obtaining sufficient rice. All Isnag families produce their own rice. The amount of rice produced depends upon several factors, such as (a) the size of the field, (b) the growth quality of the rice plants (mortality of the rice planted), (c) the extent of weed growth, (d) the quality of grain, (e) the extent of pest infestation, and (f) the quality of harvest. Factor (f) is the most crucial of all. Even when every other sign indicates a good harvest, until the rice is all gathered and safely stored in a granary, the yield could still be low. Various factors affect the quality of harvest. They may be (a) rice-related, or (b) harvester-related. All the above factors have to be controlled to increase the chances of an abundant harvest, to ensure a sufficient supply of rice.

2.1. The rice-related factors

The Isnags see the nurturing of rice as being constantly exposed to numerous elements that affect the quantity of its yield. Some appear at the growth stage of the plant itself, others during the developmental stage of the grain, and others during harvest season.

The people employ different ways of controlling these destructive elements. The pest-like elements, including wild pigs, deer, and monkeys,

are controlled by using physical deterrents, such as fences and other fence-like hedges. Small pests like insects, rats, mice, and wild chickens are controlled by herbal medicines, and more recently by chemicals. Taboo prohibitions, however, are believed to have magic-like powers. Words denoting the destructive elements and their harmful attributes are not to be uttered. Otherwise, the spirits would hear the Isnag rice farmers talking and become angry with them. In turn, they would damage the rice at one stage or another. In short, the Isnag rice farmer must invoke replacement vocabulary to prevent dangerous elements from having any deleterious effect on the rice crop.

During harvest season, the number of destructive elements increases. These may be things, activities or attributes. Consequently, many words will become taboo at that time.

Imposing this ban on many basic words causes a considerable restriction in the language. In order to alleviate the communicative constraint resulting from the prohibition, innovators derived phonological forms that would substitute for the taboo words.

The dangerous elements can be categorized according to the effect they have on rice, such as (a) *makaqqamet,* that is, 'those that encourage pests to eat the rice', (b) *makarrupsaq* 'those that cause the rice to overripen and rot', (c) *makarranna* 'those that cause rice grains to break off from the panicle', (d) *makaqqaraw* 'those that cause the consumer to eat voraciously and consume the year's supply of rice quickly', and (e) *makakkamla:t,* 'those that jinx the rice harvesters.'

2.1.1. Makaqqamet

This category of taboo words denotes things and activities that cause or encourage pests to eat or destroy the rice yet to be harvested. Words such as *laman* 'wild pig', *butit* 'rats' *ayong* 'monkey', *a:buy* 'pigs' are not to be uttered. *Magkuwal,* which means 'activities involving digging out anything from a hole-like crevice', is avoided because rats, mice, wild pigs, and monkeys will dig out the rice.

2.1.2. Makarrupsaq

This is a group of words denoting things with rotten-like physical characteristics, or that can cause things to rot, and words that specifically describe rotten attributes, or a point at which things begin to rot. These are taboo during harvest season; otherwise because the feature of rottenness would be transferred to the rice. *Kawel* 'human feces,' *marupsaq* 'to rot,'

nabuyuq 'stinky smell,' *tumu:bu* 'to germinate' (germination is seen as rotting), are also taboo words. In addition, *Laqlakay* 'old man,' and *baqbakat* 'old woman,' are taboo because these words imply old age, a quality which when transferred to rice describes the rotting stage.

2.1.3. Makarranna

Words in this category directly describe, or resemble rice grains separating from the rice panicles. Such words include *mamugat*, 'to pick coconut fruit' (breaking off one coconut from a cluster of many), *ranna* 'grains fallen off the panicle,' *guput* 'small cluster of grain fallen off the panicle,' *mamasag* 'to urinate' (the droplets resemble rice grain dropping), and *baggat* 'husked rice'.

2.1.4. Makaqqaraw

The taboo words in this category are those that denote things, activities, and attributes which are believed to cause the people to eat voraciously and so consume the year's supply of rice too fast. Such words include *ki:wat* 'eel' (a delicacy; slides away easily because it is slippery), *maglinlina:t* 'to eat greedily,' *mabisin* 'hungry,' and *magkaru* 'to be quick' (rice will run out quickly too).

2.1.5. Makakkamla:t

The name of the category *makakkamla:t* came from the word *kamla:t* which means 'to be a jinx at fishing or hunting.' A fisherman or a hunter who is *kamla:t* cannot catch fish or game, and other hunters and fishermen will not have him in their company because they will get the same curse. When this term is applied to rice harvesting season, it means that, although the harvester has been harvesting all day, s/he is able to collect only a few bundles of rice. One class of words is believed to jinx the harvesters. These words are *makakkamla:t.* Some such words are *matay* 'to die', *marupaq* 'to break, as of clay pot', *mapsit* 'to break, as of eggs'. Things such as eggplants and gourd type vegetables are taboo for the harvester to eat for they will bring about the same effect.

2.1.6. An-anitu

The *An-anitu* are the spiritual entities that may harm the rice crop. Generally, taboo words do not directly affect the rice, but they do affect the spirits (*an-anitu*) doing activities. These words are taboo because the Isnag fear that the malevolent spirits, upon hearing them, will act on them

or will believe that the uttered words are meant for them. The set of such words include *mangan* ‘to eat’ (the malevolent spirits will eat with them), *umbet* ‘to come’ (the malevolent spirit will come), *mawe* ‘to go’ (the benevolent spirit will leave them), *magga:ni* ‘to harvest rice’ (the malevolent spirit will also harvest the rice), *sumika:p* ‘to start harvesting’ (the malevolent spirit will start harvesting with the harvesters) and *magtakaw* ‘to steal’ (the evil spirit will steal the rice).

2.2. The harvester-related factors

The role of the harvesters in the harvest yield is as crucial to a successful outcome as the amount of rice to be harvested. The ability of the harvesters to harvest the rice at the proper time affects the yield because if the rice is not harvested on time, grains will start falling off the stalk. So the longer the rice farmers take to harvest the rice, the lesser the yield. Like the rice-related factors, the elements believed to adversely affect the efficiency of the harvesters are controlled by the prohibitions of taboo. These may be things, activities and attributes that are believed to cause the delay of harvest. The categories include (a) *makatturun* ‘those that aggravate (negative situations) (a) *makaddaqdap* ‘those that cause sleepiness,’ (c) *makabbisin* ‘those that cause hunger’ and (d) *makawwaw* ‘those that cause thirst’. All words that denote these processes become taboo.

2.2.1. Makatturun

The name of the category *makatturun* comes from the root word *turun*, which means ‘to aggravate.’ Words in this group that become taboo are those believed to have a symbolic effect on the harvesters when uttered. For example, the word *init* ‘heat’ should not be uttered because the heat will become unbearable, will make the harvesters seek the shade more often, and will delay their harvest. The word *gabi*, ‘evening/night,’ if uttered will cause darkness to come sooner, thus shortening the daylight, the only time they could harvest. Other words in this category are: *maplata:an* ‘to get cuts from sharp leaves of some grass, *nasi:li* ‘spicy hot,’ *natakit* ‘painful,’ *napasu* ‘hot,’ and *magadang* ‘to beg for something,’

2.2.2. Makaddaqdap

The second harvester-related category of taboo words is *makaddaqdap*. The root word *daqdap* means ‘to be sleepy.’ This category of taboo words denotes sleep or sleepiness. Words like *matu:dug* ‘sleep,’ *sidaqdap* ‘sleepy,’

sittu:dug 'wanting to sleep,' are not to be uttered during harvest season as they cause the harvesters to be sleepy or sluggish and lethargic. Therefore they will not harvest much.

2.2.3. Makabbisin

The taboo words that come under the category *makabbisin* denote hunger, or things that cause hunger. The words *mabisin* 'to be hungry,' and *sikkan* 'would like to eat,' are the only two taboo words in this category proper, but there are also things that are taboo to eat, and taboo activities.

2.2.4. Makawwaw

The category of taboo words called *makawwaw* denote thirst or drinking. The words in this category are, *sikkinum* 'wanting to drink,' *mawwaw* 'thirsty,' and *danum* 'water.' These words, if uttered during harvest season, would frequently make the harvesters thirsty. They would then leave their harvest field to go for water, adding more delay because of the mountainous topography of their rice field.

3. Derivation of the substitute words

In summary about one hundred common words of everyday usage become taboo during rice harvest season. These words embody concepts commonly referred to by the native speakers in their daily interaction. Making these words taboo constrains the people's daily routine interaction. To maintain normalcy in the language's communicative capability, innovators derived phonological forms as substitute words (SW) for the taboo words (TW) from mediating concepts (MC). The process can be represented by Figure 1 showing the mapping of the semantic concepts (S) and the phonological form (P).

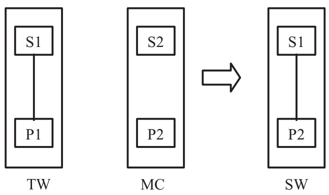


Figure 1. Mapping of semantic concepts and phonological units.

Except for borrowed words and forms derived by native innovation, all the substitute words' phonological shape originated from other conceptual units which serve as the mediating concepts in the derivation process.

3.1. Conceptual processes

In the derivation of the substitute forms, the innovator does not randomly select just any phonological shape. Evidence shows that he goes through the rigors of detailed conceptual investigations and phonological manipulation. The conceptual processes employed in the derivation are the following: (a) metonymy, (b) metaphor, (c) borrowing, (d) descriptive paraphrase, and (e) native innovation. These processes will be discussed in detail in the following sections, and examples will be given for each process.

3.2. Metonymy

Many of the substitute words hold a conceptual relationship with the taboo words for which they stand. A common one is where the taboo word and its substitute word belong to the same cognitive structure or cognitive model. Such a relationship is popularly known as metonymy, (Lakoff, 1987), (Lakoff and Johnson, 1980), (Lakoff and Turner, 1989), (Langacker 1993), and (Kövecses and Radden, 1998). There are many such metonymic relationships. In the derivation of the substitute words, the following schematic relationships have been observed: part-whole, generic-specific, thing-attribute, thing-thing, activity-activity, cause-effect and reason-result (Lakoff 187: 273). Each of the paired concepts are only a part of a larger conceptual structure.

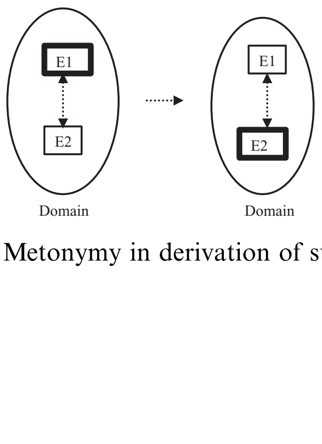


Figure 2. Metonymy in derivation of substitute words.

Schematically, the metonymic mechanism used in the derivation of substitute words may be represented by the diagram in Figure 2. E1 and E2 are various paired concepts, which serve as the basis for metonymy.

The conceptual process may be represented by the diagram in figure 3.

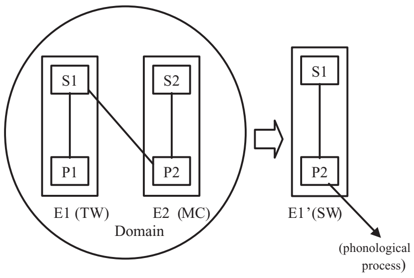


Figure 3. Conceptual process in derivation of substitute words.

Strictly speaking, the conceptual process involves a simple borrowing of surface forms of another element. While substitute words stand for the taboo words, they don't lose their own original meaning. The context of their usage determines which meaning is activated. Thus, the substitute word becomes temporarily polysemous. It represents the meaning of the taboo form and its own original meaning.

In some cases the substitute words are also modified phonologically making them significantly different from their original form (section 4). Such forms constitute a special vocabulary unique to rice harvest season.

3.2.1. Part-whole metonymy

The metonymic relationship called Part-Whole is also known by other names such as, synecdoche (Larson 1984: 113), meronymy or partonymy (Wierzbicka 1996: 60). This requires that there must be parts that relate to one another in a particular configuration constituting a unitary conceptual structure (Lakoff 1987: 84). Thus, the taboo word *magparti* 'to slaughter an animal' is replaced by the word *mamanit* 'to produce a singed hair smell,' which is only one substep in a "slaughtering scenario" which has the following structure:

taqman 'securing' catching the animal to be slaughtered
pingilan 'tying-up' tie up the animal to incapacitate it

suweqan 'killing' bleeding the animal to death by slashing the throat
ilangan 'dehairing' singeing the hair and scraping it off
tup-an ' cutting-up' eviscerating and cutting-up the animal

The elements of the slaughtering scenario are chronologically related and contingent on one another. I would like to propose that in this particular example there are two steps involved in the metonymic derivation. The first step is identifying the activation point (Langacker 1987: 385) of the scenario, which is *ilangan* 'dehairing by singeing the hair.' The second step is to identify the next lower level trigger point in the *ilangan* sub-structure and employ the cause-effect schema. *Mamanit* 'to produce a singed hair smell' came from the word *banit* 'singed hair smell,' which is the trigger point in the sub-structure.

3.2.2. *Generic-specific metonymy*

Another commonly employed metonymic relationship in the derivation of substitute words is generic-specific, also known as hyponymy (Hurford and Heasley 1984: 105). A generic concept substitutes for a specific one or vice versa. Thus the word *battaq* 'bundling material' is substituted by *balluwit* 'a bundling strip made from the bark of a specific tree.' Schematically, the relationship is [[Y] → [X]], read as 'X is an elaboration of Y.' In the classificatory hierarchy, it is the genus-species or the species-variety type of relationship. This metonymic relationship applies not only to one particular level, but also operates at various levels of schematicity (Langacker, 1991: 118), such as genus-species and species-variety. The conceptual process may be represented by the diagram in figure 4.

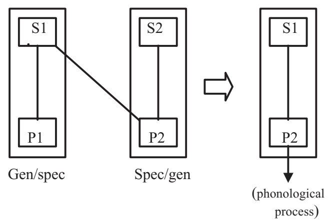


Figure 4. Generic-specific metonymy

3.2.3. *Attribute-for-thing metonymy*

The Attribute-for-Thing metonymic mechanism for deriving substitute words takes the phonological form from the central attribute (A) of the taboo word (T) during harvest season. The process also operates in the

other direction, i. e., Thing-for-Attribute. The phonological form of the lexical item denoting a thing is substituted for its central attribute. The derivational process may be shown by the following diagram.

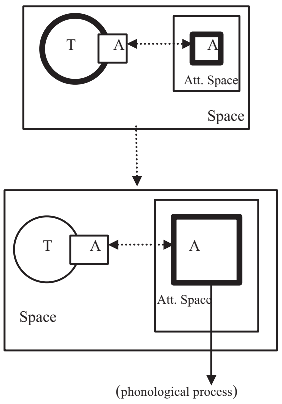


Figure 5. Attribute-for-thing metonymy

The data show that central attributes are selected to substitute for the taboo thing providing they do not have any negative effect on either the rice or the harvesters. If the central attribute poses a negative effect on either the rice or the harvester schema, a loan word equivalent to the attribute will be chosen. Thus, the substitute word for *apuy* 'fire' should have been *napasu* 'hot' but it has a negative effect on the harvesters, so a loan word *napudut* 'hot' was chosen instead.

The word *maglinlina:t* 'voracious (eater)' is taboo during harvest season. The thing that is commonly perceived to have this attribute is a spirit named *liya:m*. The word *maglinlina:t* is therefore replaced by *magliyliya:m* which literally means 'to act like a *liya:m* spirit.'

3.2.4. Homogeneous metonymy

In the homogeneous metonymic pattern, the source and target domains are one and the same. The taboo word and its substitute belong to the same category. They differ only in the perceived effect they have on either the rice or the harvester schema. If the taboo word is a thing, it is replaced by another thing in the same category. If the taboo word is a process, it is replaced by another process in the same category. The taboo word and its substitute are contiguous. When the taboo word is a prototype of a

category, it is replaced by one that is closest to it. The following are examples:

Taboo words	Substitute words
ba:li 'strong wind/typhoon'	*a:ngin* 'air'
uda:n 'rain'	*darodu* derived from *darru* 'sudden spurt of rain' (see section 4.1)
mamu:ga:t 'to pick a coconut'	*magbu:ra:s* 'to pick coffee beans'
masiya:nan 'to dry out (naturally'	*mabbata:n* 'to dry out by boiling'

3.2.5. Cause-for-effect metonymy

The causative metonymic pattern includes result-for-process conceptual relations. The causation involved is an indirect one, lacking many of the characteristics of a prototypical causation (Lakoff 1987). An example of this is the taboo word *marupaq,* which means 'to break (as of clay pots).' The substitute word is *mataqnag* which means 'to fall.' This carries the implication that when something falls, it breaks when coming into contact with the ground or floor. Figure 6 represents the conceptual process of the substitution where t is time and R is result.

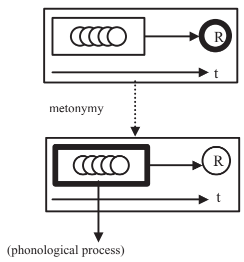


Figure 6. Cause-for-effect metonymy

3.3. Metaphor

Another conceptual mechanism employed in the derivation of substitute words for the taboo words is metaphor. It involves a 'stand-for' relationship between distinct domains: a source domain and a target domain that have analogous characteristics. The source domain is projected onto the target domain when one element of the target domain is replaced by

the analogous element of the source domain. The mechanism may be represented by Figure 7.

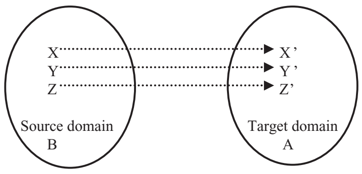


Figure 7. Metaphor

A characteristic of the target domain that becomes taboo is replaced by an analogous characteristic of the source domain. The mapping operation may be stated by following notation.

A:X::B:X' (X and X' are analogous characteristics of the target domain A and the source domain B respectively).

X in domain A is is replaced by X' in domain B (with or without invoking an additional phonological process).

The two most common domains involved in the metaphorical derivation of Isnag substitute words are those that relate inanimate things (as source domain) to animate (humans, as target domain). An example is the word *laqlakay* 'old man' or *baqbakat* 'old woman.' Both are replaced by the term *magmaroqam* 'fully matured fruit.'

3.4. Lexical borrowing

I use the term "lexical borrowing" here in a way that is rather distinct from the traditional usage. In traditional borrowing, a concept and its surface form is taken from a donor language and become part of the vocabulary of the recipient language. Borrowing here is limited to the surface form of a word in the donor language that represents the equivalent concept in the recipient language that becomes taboo during harvest season. The borrowed forms never become a permanent part of the vocabulary of the recipient language, as it would if it were a traditional borrowing. The borrowed forms are never used beyond the time of harvest season.

The conceptual process involved in the derivational strategy may be by the diagram in Figure 8. The recipient language (RL) takes the phonological form of the relevant concept (S) of the donor language (DL). The borrowed form will be treated like any other lexical item in the recipient language. It can take any and all relevant affixes.

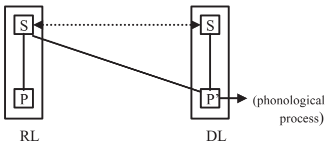


Figure 8. Borrowing

3.5. Descriptive paraphrase

Another type of taboo formation invokes a descriptive paraphrase. This derivational mechanism involves compositionality. The noncompositional taboo word is replaced by its perceived compositional equivalent. The example from the data articulates the Isnag view of the sibling relationship, i. e., they share the same umbilical cord whether they are twins or not.[2] Thus, when *wagi* 'sibling' becomes taboo, it is substituted by *kaputad kapusgan* which literally means 'cut from the same umbilical cord. Taken apart, the constituent unit *kaputad* means 'cut-from-the-same-piece' and *kapusgan* means 'attached to the same umbilical cord.' The whole phrase may be teased apart to show the constituent morphological units.

[[[*ka*-] [*putad*] [*ka*-[*pusag*]-*an*]]
same cut same umbilical cord

The affix *ka-...-an* is here treated as one discontinuous morphological unit.

3.6. Native innovations

The class of native innovations consists of substitute words whose linguistic origins are untraceable. Isnag speakers themselves claim that these originated from the spirits. They are very natural Isnag words in every way except that they have specialized usages for the harvest season.

For this group of substitute words, I would like to hypothesize that they were, at one time, regular words in the language belonging to different categories and/or domains from the taboo words which they are-replacing. They were originally derived by some one of the mechanisms already discussed. However, through time they became so obsolescent and archaic that none of the present speakers know their original meaning. They retain their functions as substitute terms for taboo words. The rationales for this hypothesis are: (a) The substitute words have the same

affixation as the taboo words for which they are substituting; (b) The absence of phonological strain in their phonetic shape, including stress indicating less likelihood of borrowing; and (c) They are not recognized as being legitimate words in the *lingua franca* from which most of the borrowings come.

Devoid of meaning outside harvest season, these phonological forms are, in a sense, only nonce forms vis-à-vis the taboo words, and function only during harvest season. While other groups of substitute words are polysemous during harvest season, the forms that constitute this group are not.

4. Phonological derivations

Some output forms from the semantic derivations discussed above are further modified through phonological processes. At a glance there are some taboo words that look like native innovations (section 3.6). Apart from the meanings they assumed, they don't appear to have their own meaning. However, a closer investigation of their phonological shapes revealed that they resemble some taboo words in the same domain. Take for example the taboo word *anuq* 'chicken.' It is replaced by the word *kala'bikab*, a word with no apparent original meaning of its own. However, thorough semantic investigation of the *anuq* schema revealed that there is a word *kayabkab* which means 'to flap wings,' one of the perceived central attributes of chickens. Comparing *kala'bikab* and *kayabkab* shows their phonological similarity. The former is derived from the latter, as I illustrate below.

In reconstructing the phonological processes, it was discovered that the following are used: epenthesis, apocope, phoneme replacement, gemination, stress shift, lateralization and voicing. In each of the conceptual processes involved, there were output forms that were further modified to ensure a significant dissimilarity between the substitute words and the taboo words for which they are substituting. The following sections discuss in detail the phonological derivations some output forms have undergone.

4.1. Metonymy and phonological change

Some metonymic derivations of substitute words are further modified by various phonological processes. A classic example of this phenomenon is

the derivation of *kala'bikab* the substitute word for *anuq* 'chicken.' The form *kala'bikab* was derived from *kayabkab* 'to flap wings,' the perceived central attribute of chicken., i. e., a typical thing that chickens do. Then *kayabkab* underwent the following steps of phonological change.

a. lateralization of the glide: [−cons, −voc] > [+cons, −voc]:
   kayabkab > **kalabkab*
b. /i/ epenthesis (between consonant cluster):
   **kalabkab* > **kalabikab*
c. stress placement: **kalabikab* > *kala'bikab*.

Example 2

Taboo word	Substitute word	Derived from
atu 'dog'	*ali-al*	*al-al* 'to pant'

The form *al-al* 'to pant' is based on the speakers' encyclopedic knowledge of what dogs typically do when they get hot or tired.

Derivation process

a. /i/ epenthesis (between consonant cluster): *al-al* > **ali-al*
b. stress placement: **ali-al* > *a'li-al*

Example 3

Taboo word	Substitute word	Derived from
marupsaq 'to rot'	*dumadda:n*	*dada:n* 'old things'

This substituted form draws on the speakers' knowledge about old, perishable items- they decay and give off distinctive odors during the process.

Derivation process

a. -um- affixation (denote process): *dada:n* > **dumada:n*
b. C2 (of root) gemination: **dumada:n* > *dumadda:n*
   The gemination preserves the length of the vowel in the final syllable of the root. In Isnag, long vowels are always stressed.

Example 4

Taboo word	Substitute word	Derived from
mangigub 'to cook rice over fire'	*manguram*	*siram* 'to sterilize with fire'

In this case, the speakers evoke their knowledge about the general functionality of applying fire to something.

Derivation process

a. *mang*- affixation (for agent focus): *siram* + *mang*- > **mangsiram*
b. C1 (of root) deletion: **mangsiram* > **mangiram*
c. /i/>/u/ vowel replacement: **mangiram* > **manguram*
d. stress placement: **manguram* > *ma'nguram*

Example 5

Taboo word	Substitute word	Derived from
uda:n 'rain'	*darodu*	*darru* 'sudden spurt of rain'

This usage is motivated by the general knowledge of the varieties of rainfall, and involves the choice of a word that designates a very specific kind of downpour to replace the general term.

Derivation process

a. /o/ epenthesis (between consonant cluster): *darr*u > **daroru*
b. /r/>/d/ Cf replacement: **daroru* > *darodu*
   /o/ in Isnag is always long, and is stressed.

4.2. Borrowing and phonological change

The phonological modification of substitute words is not confined to those derived via conceptual processes. There are borrowed word substitutes that are simply modified by phonological processes. Both the taboo term and the borrowing mean the same thing. The nature of the modification is due to the specific phonological differences between the recipient language and the donor language. The following are illustrations:

Example 6

Taboo word	Substitute word	Derived from
dumerun 'to move over'	*dumandan*	*dumïndïn* (Il loan: 'to move over'

Derivation process

a. /ï/>/a/ replacement (/ï/is not an Isnag vowel): *dumïndïn* > **dumandan*
b. stress placement: **dumandan* > *du'mandan*

Example 7

Taboo word	Substitute word	Derived from
gabi 'night'	*kureram*	*kuredïmdïm* (Il loan: 'twilight'

Derivation process

a. final syllable syncope: *kuredïmdïm* > **kuredïm*
b. /ï/>/a/ replacement : **kuredïm* > **kuredam*
c. /d/>/r/ replacement: **kuredam* > **kureram*
d. stress placement: *ku'reram*

This example is interesting because the selection of the substitute form itself is made within the same domain as that of the taboo word, but the specific item used for the replacement designates a subpart of the time cycle designated by the taboo word.

4.3. Sound change only

In the vocabulary of substitute words, there was one form that was derived from the taboo word solely by phonological processes. The taboo word *ikkam* 'bundled harvested rice,' is substituted by the form *igam*, derived by the following processes.

a. C2 deletion: *ikkam* > **ikam*
b. Voicing: **ikam* > **igam*
c. Stress placement: **igam* > **i'gam*

5. Conclusion

The Isnag taboo words are classic examples of folk categorization. The criterion for membership is some extrinsic feature, i. e., the feature for membership is often not any inherent semantic feature of the item itself, but rather is based on the role the item plays in the production of rice (Wierzbicka 1996: 374). The intrinsic features (inherent features of members) are very diverse. Apart from the perceived effect the taboo words potentially have on either the rice or the rice harvesters, there is no consistent criterion that holds them together as a category.

In contrast to other folk categories in the language, the category of taboo words has only one requisite feature for membership. A member word has to evoke a feature that is believed to be transferable to either the rice or the harvesters, and will negatively affect the harvest yield if uttered during harvest season. Though apparently a folk category (Taylor 1992: 72), it does not show any prototype features. There is no single member that can be considered an exemplar to which other members may be compared. No word is more taboo than another. They all have equal status of membership in the category.

Even the subcategories do not exhibit prototype characteristics. For example, in the subcategory *makarrupsaq* 'those that cause something (rice) to rot' there is no single word that is considered more *makarrupsaq* than others. There are no clear examples of prototypes and there are none that can be considered not-so-clear instances of the category (Taylor 1992: 42). Moreover, a word does not need to have all the perceived negative effects on rice or on the rice harvesters in order for it to become taboo. In fact almost all the taboo words have only one feature that qualifies them for taboo membership.

Substitute words derived via metonymic models constitute the largest number of the rice harvest taboo words, about sixty nine per cent. Metaphor, lexical borrowing, and native innovations equally share the remainder. This proportion confirms the claim that Lakoff (1987: 77) makes, i. e., "metonymy is one of the basic characteristics of cognition."

In the phonological modifications, there are no apparent predictable phonological rules involved in the change of some output forms resulting from the various semantic derivations. The epenthetic sounds do not constitute any natural phonological grouping either. A plausible reason for these seemingly phonological deviations is that the primary motivating factor is not phonological, but social.

Notes

1. I thank Mr. Marlin Leaders for his editorial comments on the earlier versions of this paper. I also thank my Isnag friends, Benigno Saweran, Manuel Arsit, Ingga, Appanay, and Dammut for their assistance in the research for this project.
An earlier version of this paper which focused only on the linguistic derivation of the substitute words was read at the 10th World Congress of the International Association of Applied Linguistics.
2. This particular metaphor is widespread among Austronesian language groups (Barbara D. Grimes, p. c.).

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The Tagalog prefix category *PAG*-: Metonymy, polysemy, and voice

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1. Introduction[1]

I direct the reader's attention to the words in bold face in the following quote from *Scoreboard Sports and Leisure Magazine*, published in Manila:

> *Hinamon ni Senador ang mga namumuno sa sports media at mga kasali rito na huwag* **magpa-apekto** *sa mga isyung sumasalungat sa progreso ng sports, bagkus ay patuloy na* **magkaisa** *sa mga ganung uring* **pagbibigay** *parangal sa mga atletang* **nagbibigay** *ng karangalan sa bansa pati na rin sa mga indibidwal o grupong tumutulong* **magpaunlad** *ng imahe nito*.[2]

In this quote a reporter describes a senator exhorting leaders in the Philippine sports media to pay homage to athletes. The passage makes frequent use of the active voice verbal prefixes *mag-, nag-*, both of which are based on the stem-forming prefix *pag-*, which also appears in the quote. This is the kind of forceful, agent-oriented language that one would expect from a senator who is himself a famous professional basketball player and coach. This paper examines the hypothesis that *pag-* and its derivatives, used so unstintingly by the writer, constitute a complex category that is important to understanding voice and lexical constructions in this Western Austronesian language. The analysis of complex categories follows Lakoff (1987) and Langacker (1987, 1991).

I will use the symbol *PAG*- to refer to the three prefixes *mag*-, *nag*-, and *pag*- as a single category. Four specific questions will be explored regarding the semantics of *PAG*-: (a) Is there a category schema? (b) Is there a category prototype? (c) Is there a well motivated polysemous structure, that is, a set of conventional meanings explainable in terms of reasonable or natural elaborations and extensions (where *reasonable* and *natural* mean likely to occur to anyone knowledgeable about Tagalog culture)? and (d) Can lexemes that incorporate the prefix be adequately characterized using theoretical concepts from cognitive linguistics, such

as *trajector* and *landmark*, *bounded* and *unbounded process*, *temporal* and *atemporal relations*, or *profile* and *base*? The answers to these questions will be tested by determining how well they explain complex lexical constructions in so far as this is possible without similar analyses of all of the co-occurring affixes and roots. The data for this study are drawn from previously published studies and from interviews conducted by the author in Las Vegas and Manila.

Before going on to these topics, consider examples (1–3), which illustrate the function of the prefixes in voice: *mag*- and *nag*- have agent focus[3], as shown in (1) by the specific (SPC) marking of the agent pronoun *ka* 'you'. This choice of pronoun corresponds to a noun-phrase using the article *ang* to mark a nominal agent as specific. In previous linguistic studies of Tagalog, the *ang*-phrase has been labeled focus, topic, trigger, subject, pivot, nominative, or absolutive (Himmelmann 1999; Ramos and Bautista 1986; Schachter 1987). Direct undergoers of *mag*- and *nag*- predicates appear in genitive phrases, which are marked with *ng*, as in (1) *ng galang* 'respect' and (2) *ng kotse* 'the car'.[4] Secondary undergoers are also possible. These appear in directional (*sa*) phrases. *Pag*- lacks explicit focus. Consequently, the agent (Christmas) in (3) appears in a genitive phrase.

(1) ***mag**-bigay ka ng galang*
IRR.AF-give 2SG.SPC gn respect
'you should show respect'

(2) *habang **nag**-maneho ng kotse*
while RLS.AF-drive GN car
'while he was driving the car'

(3) *maligaya ang lahat sa **pag**-dati-ng ng kapaskuhan*
happy SPC everybody DRC GER-arrive-LG GN Christmas
'everybody is happy with the arrival of Christmas'

These observations can be framed in terms of cognitive grammar as follows: The most salient participant – the one appearing in the *ang*-phrase and marked as SPC – is a *trajector* (tr). In this respect, *ang* functions much like the Hawaiian preposition *o'* (Cook, this volume). The trajector is an agent – i. e. a source or initiator of activity. The undergoer in the genitive phrase is the primary *landmark* (lm). Secondary landmarks appear in *sa*-phrases. Because they are verbal prefixes, and because verbs are inherently relational, *mag*-, *nag*-, and *pag*- each establishes a relation

between a trajector and a landmark.[5] The nature of that relation turns out to be fairly complex and variable. It will occupy much of the discussion in this paper. Trajector (agent) and landmark (undergoer) are not always instantiated with arguments. Other verbal affixes have different linkages of trajectors and landmarks to agents and undergoers. In other words, focus on agent or undergoer varies with the verbal affix.

The *PAG*- forms belong to a larger semantic network which in first approximation can be represented as a matrix of dimensions including mood (irrealis or realis), voice (agent-focus versus undergoer-focus), and nominalization (Schachter and Otanes 1972, Schachter 1987, Himmelmann 1991, Drossard 1994). The prefixes *mag-, nag-,* and *pag-* correspond as triplets to *maN-, naN-, and paN-*, whose semantics and morphophonology are more idiomatic and complex, and to *ma-, na-*, and *pa-*, which are undergoer-oriented, with focal participants that lack control.[6] The *m-* and *n*-forms in these sets are irrealis and realis, respectively. The *p*-forms lack explicit orientation in that they have no corresponding arguments in *ang*-phrases. For example, the agent of *pagdating* in (3) appears in a genitive phrase. The *p*-forms are usually interpretable as gerunds.[7] The parallelism across the three *sets* of prefixes itself constitutes evidence that each set is internally coherent.

De Guzman (1978 and personal correspondence) considers *pag-* a derivational affix that forms verb stems which get affixed by voice markers such as *m-* (active/agentive voice), *i-* (benefactive), etc. Once such stems have been inflected for voice, they can then be inflected for mood, e. g. *m-* + *pag*-stem > *mag*-stem (infinitive form). The process *m-* > *n-* changes the irrealis/infinitive form (true of *mag-*, *mang-* and *ma-* verb stems) to the mood feature [+started/begun], i. e. realis. Ricardo Nolasco[8] notes further that *mag-* is allomorphic with the infix *-um-*. "The [*m-*] replacive affix is used when the stem contains a stem forming affix, while the [*-um-*] is used when the stems do not contain any stem forming affix." Schachter (1987) also regards *pag-* as a stem-forming prefix and *m-* and *n-* as prefixes that combine with *pag-*, which assimilates to *mag-* and *nag-*.[9] Himmelmann (n.d.b) observed that "the initial nasals in these forms, *n* and *m*, are historically related to the infixes *-in-* and *-um-*, respectively."

Bloomfield (1917, II: 226, 231) referred to *pag-* predicates as "the abstract of action." *Pag-* also forms "the abstract of action" with roots that take *-um-* rather than *mag-*, so at this point the set {*mag-, nag-, pag-*} intersects with the set {R1,*-um-*, *pag-*}. Otherwise, the two sets appear to be in complementary opposition, though the opposition is imperfect and

the semantic distinctions between them are still unclear. Since this paper investigates only the semantics of the *PAG-* forms, it is not intended to solve the problem of distinguishing *-um-* from *mag-*. The *PAG-*forms combine productively with stems formed with *pa-* to predicate complex events, as in *nag-pa-dulot* '(agent) ordered (someone) to serve (food),' from the nominal root *dulot* 'offering, food that is served ...'. *PAG-* also forms constructions with other affixes. A few examples will be discussed as a test of the analysis.

2. Review of previous work

Bloomfield (1917, II: 231) recognized the *PAG-* forms as a set, characterized as active and deliberate, and, by contrast with *-um-*, having "more effect on external objects." Most of the *PAG-* predicates that are based on roots for which *-um-* forms *do not* occur could be classed as deliberate, but a number of usages suggest possibly non-deliberate actions, including *nagáantòk* '(I) am sleepy', *nagsidating* '(they) arrived', and *pagbibiyábo* 'habitual swinging (of the legs)' (Bloomfield 1917, II: 231–232). Bloomfield also listed many deliberate actions that are expressed with *-um-* forms rather than *PAG-* forms, including terms for watching, snatching, going upriver, cutting, confessing, taking, eating, fighting, bending something, and many more. If there actually exists a correlation of *PAG-* with deliberation and *-um-* with non-deliberation, it is weak, resting mainly on the preponderance of deliberative senses in the *PAG-* roots.

Some roots may take either *mag-* or *-um-*. Bloomfield (1917, II: 233) stated that the *mag-* forms add another object and are sometimes reflexive. Where *-um-* forms predicate specific acts, *mag-* forms express general activity. A few examples of predicates based on roots that use both are worth considering. The items in (4–7), from (Bloomfield 1917, II: §§ 348, 351), appear to defy any attempt to sort by a single criterion of externality, transitivity, generality, or plurality of action. However, they can all be construed as deliberate. Note that even one of the reflexives (*bumaluktòt*) is formed with *-um-* rather than *nag-*.

(4) a. *Sya y nagàáral*. 'He is studying.' [deliberate, specific]

b. *umáral* 'teach morals, instruct' (archaic) [deliberate, general, external, transitive]
(See footnote 1 for an explanation of diacritics.)

(5) a. *Magbaluktot kà nang yantòk.* 'Curve some peices of rattan.' [deliberate, distributed (repetitive, plural undergoers), transitive, external]

b. *Bumaluktot kà nang yantòk.* 'Bend a piece of rattan.' [deliberate, transitive, external]

c. *Ang áhas ay bumaluktòt.* 'The snake doubled itself up.' [deliberate?, reflexive]

(6) a. *Magbálot ka nang kúmot.* 'Wrap yourself up in a blanket.' [deliberate, reflexive]

b. *Bumálot ka nang súman ….* 'Roll up some *suman* (sticky rice cooked in banana-leaves).' [deliberate, external, repetitive?, transitive]

(7) *Nagbíbile si Hwána nang sombréro.* 'Juana is selling hats.' [deliberate, distributed, external, transitive]

2.1. Transitivity

Whenever agency is involved in the meaning of a linguistic form, the possibility arises that the form may predicate some degree of transitivity. Involvement of transitivity is suggested also by Bloomfield's observation that *mag*- predicates contrast with -*um*- predicates by adding another object affected. An examination of Bloomfield's (1917, II) data shows that the *PAG*- predicates are not distinguishable from one another, nor are they readily distinguishable from the -*um*- predicates on this basis.[10] The large number of intransitive constructions, over a third of the total even if one omits items with roots that appear to be semantically transitive, suggests that a prototype account based on transitivity is not highly informative. When we examine Bloomfield's -*um*- forms, the situation is much the same, except that the overall frequency of transitives is somewhat less.

Ricardo Nolasco asserts that the *mag*- and *um*- forms are *all* non-transitive, in that they are neutral with respect to volitionality of the agent and their objects (or patients) seem to be best described as attributes or clarificatory details involved in the activity, rather than directly affected objects.[11] This may help to explain why so many instances of the *PAG*-forms can be readily translated as *pursuing an activity somehow related to the meaning of the root or stem to which it is applied.*

2.2. Lopez

Cecilio Lopez (1940: 99), a native speaker, lamented the "almost unexplainable difficulty of distinguishing when to use *um*- and when *mag*-." He characterized -*um*- as "internal" and *mag*- as "agent or actor (external)", but he found that the internal-external distinction seemed not to help much with terms such as *nag-aaral* 'studying' and *umaaral* 'teaching'. He wrote "*mag*-, *nag*- derivatives signify primarily 'a putting into action' of that which is expressed by the WB [word base]."[12] In evidence, he offered the sentences in (8):

(8) a. *Akó'y naglalagarì.* 'I am sawing.'

b. *Si Leon ay nagsisigâ sa gubat.* 'Leon is making fire in the woods.'

To distinguish the "inner motion" of -*um*- from the "putting into action" of *mag*-, *nag*-, he offered the items in (9):

(9) a. *Akó'y bumangon.* 'I got up.'

b. *Ang pari'y nagbangon ng bagong bahay.*
'The priest built a new house.'

Lopez (1940: 102) observed also that the constructions *mag*-…-*an* and *nag*-…-*an* express plurality or reciprocity, as in (10).

(10) *Si Mesyong ay st Toryo'y nagkastilaan.*
'Mesyong and Toryò spoke with each other in Spanish.'

With a shift of stress to the final syllable of the root, *mag*- and *nag*- predicate intensity, as in (11).

(11) *Sindó'y nagsulát.* 'Sindó wrote (intensively).'

With reduplication in the root, *mag*- and *nag*- produce a "stronger frequentative and intensive" significance, as can be seen in the contrast of (12 a) to (12 b) (Lopez 1940: 103).[13] Example (12 b) suggests that *nag*- predicates plural or distributive action, from which the extension to an intensive action is obvious.

(12) a. *Ang aso'y lumulundág.* 'The dog jumps (is jumping).'

b. *Ang aso'y naglulundág.* 'The dog jumped (perhaps of joy upon seeing its master) continuously.'

Schachter also commented on this construction, which he referred to as the "monosyllabic reduplicating prefix":

> In one of its uses it combines with *pag-* to form certain additional intensive verbs: e. g., *pagtatapak* the stem of DT [dative trigger] *pagtatapakan* 'step on (repeatedly etc.)' (cf. DT *tapakan* 'step on') and *pagbabagsak*, the stem of PT [patient trigger] *ipagbabagsak* 'drop (repeatedly etc.)' (cf. PT *ibagsak* 'drop'). (Schachter 1987: 950)[14]

2.3. Pittman

Pittman (1966) listed numerous semantic "subdivisions" of *-um-* and *mag-*. For example, he gave the senses in Table 1 for occurrences on identical stems. Pittman's "causative" echoes Lopez' (1940) "putting into action." Pittman's "external colour application" echoes Bloomfield's (1917) "externalized effects" and anticipates Panganiban's (1972) "external motion" (see 2.4, below). His categories of "dual or reciprocal" and "repetitive" appear to reaffirm Lopez' (1940) notions of "reciprocity" and "frequentive or intensive". His category of "centrifugal" seems to me to be merely a logical consequence of the sense of putting something into action, that is, *magbilí* 'to sell' is putting buying into action. If the original standpoint is that of the buyer, *mag-* must shift it to the seller as the one who is setting the process in motion.

Table 1. *-um-* vs. mag- on identical stems (Pittman 1966)

1.1	Non-reflexive	1.2	Reflexive
2.1	Non-causative	2.2	Causative
3.1	Centripetal	3.2	Centrifugal
4.1	Non-dual and non-reciprocal	4.2	Dual or Reciprocal
5.1	Non-repetitive	5.2	Repetitive
6.1	Intrinsic colour change	6.2	External colour application

Noting that "some uses of **-um-** and/or **mag-** are no doubt derivational," Pittman also proposed the existence of patterns in the senses of forms that take only *mag-*. Derivational senses of stems that take only *mag-* include *personal and occupational actions* (e. g. *mag-anluwagi* 'to be

a carpenter'), *verbal acts* (e. g. *magbantâ* 'to threaten'), *emotional* (e. g. *magbatá* 'to suffer, bear, endure'), *deliberate (volitional)* (e. g. *mag-akalà* 'to suspect'), and *quantity* (e. g. *magdalawá* 'to be two'). I doubt that Pittman is justified in making all these distinctions. All except the first appear to be derivable from the sense of engagement in activities implicated in the semantics of their nominal roots. For example *bantâ* is defined by Panganiban (1972) as 'threat'. Thus, *magbantâ* is simply making a threat and its status as a verbal action has no particular significance. Pittman also proposed three categories that he refers to as *secondary*, *progressive*, *constructive*, and *distributive*, but which seem to me also to be logical extensions of causation, if not actual instances: e. g. *mag-apóy* 'to burn hot', *magbaging* 'to grow vines', *mag-ani* 'to harvest', and *mag-abót* 'to hand', respectively. Finally, he observed that both affixes may occur in a single word, as in *mag-s-um-igaw* 'to shout at the top of one's voice'.

2.4. Panganiban

Panganiban (1972: 679) listed five senses of *mag-* as both a noun and verb prefix. As a verb prefix, what appears to be the central sense is defined as follows:

> *mag-*[4] for verb-roots to express intense acts, acts involving physical exertion or external motion, actor focus.
> – *mag-aral*, to study
> – *maglutó*, to cook
> – *magtayáw*, to dance
> – *mag-ehersisyo*, to exercise
> – *magsanay*, to undergo training
> – *magbigáy*, to give
> – *mag-isip, magbalak*, to plan; *mag-isíp*, to think deeply

The other verbal senses of *mag-* listed by Panganiban are "repeated or continuous acts", when prefixed to a reduplicated first syllable of the root (*magtatakbó* 'to run continuously or repeatedly), "exhortation to do the act a bit (where no action is done) or a bit more (where an action is insufficient) (*mag-arál-arál* 'you should study, even only a little'), when prefixed to a reduplicated root word,[15] and "similar acts performed against or opposite each other or same act by actors coming from different directions", with dual or two-party focus (*magbanggâ* 'to collide

against each other'). I will refer to the latter as *contraposed*. The noun-senses involve two related persons or things (e. g. *mag-amá* 'mother and child') and occupation or trade (*mag-aarál* 'student'). There may be a shift of stress, as in *mag-anák* 'to give birth' versus *mag-ának* 'parent and child'.[16]

2.5. Recent studies of Tagalog verbal morphology

Other literature describing *PAG*- forms is generally more concerned with syntactic issues than with a full account of their semantics. One of these issues involves the subcategorization of their bases into "affix-correspondence classes" (Schachter and Otanes 1972). For example, Schachter and Otanes (1972: 296–297) listed the following "Mag- classes" for "object verbs": 1. *mag-/-an*, 2. *mag-/i-*, 3. *mag-/-in*, and 4. *mag-/ipag-*. The result is a finely differentiated analysis, but one with little semantic motivation. The approach tells us that the meaning of *mag-* is somehow complementary to meanings predicated by *-an, i-*, and *-in*, but it seems to assume that all such forms are opaque and arbitrary. It fails to tell us why constructions using the affix combinations mean what they mean. It also seems to suggest that there are four different senses of *mag-* that complement *-an*, *i-*, *-in*, and *ipag-*. The form *pag-*, in particular, is described as though it had little relation to *mag-* and *nag-*. What strikes one immediately is that the corresponding forms (on the right of the "/") have three types of undergoer (*-an* location, *i-* conveyance, *-in* object) and that *ipag-* combines *i-* with *pag-*.[17] These facts suggest some conservation of meaning for the *PAG*- constituents. Like Schachter and Otanes, Naylor (1975: 28) wrote of "the 'implicative' focus affixes *i-*, *ipag-*, and *ipang-*," implying that the constituents *pag-* and *pang-* lack independent symbolic values.

Nolasco regards the *an-*, *i-*, and *-in* forms as transitive in contrast to the intransitive PAG forms. Thus, whatever one thinks of the semantics of PAG, it has compatible semantics with roots and stems that take the transitive affixes, suggesting that the PAG forms are more general. Schachter (1987: 949) treated *pag-* as a stem-forming affix. In combination with nouns, it forms verb stems that "denote characteristic activities involving the referents of the nouns":

> For example, *pagbus* is the stem of the actor-trigger verb *magbus* 'ride a bus', *pag-Ingles* (cf. *Ingles* 'English') is the stem of *mag-Ingles* 'speak

> English', *pagtsinelas* (cf. *tsinelas* 'slippers') is the stem of *magtsinelas* 'wear slippers', and *pag-ingat* (cf. *ingat* 'care') is the stem of AT [agent trigger] *mag-ingat*/DT [dative trigger] *pag-ingatan* 'be careful of'. (Schachter 1987: 949)

Schachter (1987: 949) identified an "actor trigger prefix *m-*" that attaches to *pag-*, which then assimilates to form *mag-*. Presumably the realis form *nag-* would require a second assimilation from *n-* + *mag-* rather than *n-* + *pag-*, which, as Nolasco noted, would be replacive. He noted that "For some purposes…it is convenient to refer to the resultant forms, *mag-* and *maN-*, as if they were single affixes rather than composites." Schachter also observed other functions of *pag-*:

> In addition, *pag-* combines with certain simple verb stems to form the stems of 'intensive' verbs: i. e. verbs that designate intense, frequent or prolonged performance of the activity designated by the simple stem. For example, *pag-* combines with *kain* 'eat' to form the stem of *magkain* 'eat (repeatedly etc.)' and with *lakad* 'walk' to form the stem of *maglakad* 'walk (repeatedly etc.)'. *Pag-* also forms verb stems with adjectives, which may themselves be morphologically complex − e. g. *pagmabait* (cf. *mabait* 'kind', *bait* 'kindness'), which is the stem of AT *magmabait*/DT *pagmabaitan* 'pretend to be kind to' − and even with certain phrases − e. g. *pagmagandang-gabi* (cf. *magandang gabi* 'good evening (the greeting)'), which is the stem of *magmagandang-gabi* 'wish good evening'. (Schachter 1987: 949−950).

These later observations of Schachter reveal the close semantic relationship of *mag-* and *pag-*. They also provide a useful description of the kinds of meanings that result from usage of *PAG-* forms with nouns, adjectives, and phrases like *magandang gabi*. We can summarize them by saying that the *pag*-constructions raise the profile of some activity conventionally associated with the referent of the root or internal stem. *PAG-* forms invite interlocutors to consider activities that are latent in the semantics of non-verbal roots or stems.

2.6. Himmelmann's classification

Himmelmann (n. d. a) observed that in studies of Tagalog roots, mostly dealing with voice affixes, "the various classification proposals differ so widely that one wonders whether the authors are dealing with the same

empirical domain." He mentioned classifications of Blake (1925: 38–39.), Schachter and Otanes (1972), Cruz (1975), McFarland (1976: 33), Ramos (1974, 1975), and De Guzman (1978). He suggested that "the major obstacle to an easy and straightforward morpho-lexical classification of Tagalog roots is the fact that there is pervasive polysemy…*with regard to the affixes which may be used for classifying roots*" [italics added – GBP]. He noted also that most formatives may occur with most roots.

Himmelmann (n. d.) identified two classes of roots that have distinct meanings with the form *ma-*. Type A is dubbed the "HAVE-formation" because the construction *ma* + *ROOT* means 'have ROOT, be characterised by what the root denotes." This class comprises mostly terms for things, animals and natural phenomena. Type B is the "BECOME-formation" because *ma* + *ROOT* means 'become ROOT, get into the state denoted by, or associated with, the root'. This class comprises mainly roots predicating states, processes, and actions. For those class B roots best regarded as things (e. g., *galit* 'anger', *gutom* 'hunger', *putol* 'a cut, a piece', *butas* 'a hole'), states are derivable by stress shift (e. g. *galít* 'angry', *gutóm* 'hungry', *putól* 'be cut', butás 'perforated'). He found that class A and B roots can be differentiated by their characteristic actor-voice constructions: "Class A roots generally allow the formation of actor voice only by prefixing *mag-*." The majority of Class B roots permit infixing with *-um-*, but some allow only *mag-* and some allow either *-um-* or *mag-*.

In my view, all of the underived nominal class B examples provided by Himmelmann can readily be construed as *results* of actions or processes, whether they are nominalizations of states, actions, processes, or things. Himmelmann observed that property roots are split between the two classes: "For example, 'beauty', 'quickness', 'quantity, plentitude' are in class A … while 'ripeness', 'cheapness', 'anger' and 'hunger' are class B." But, it appears that the items in class B are not the same sort of properties as those in class A. All those (at least in this little sample) from class B can readily be seen as end results.

It seems that the use of *-um-* implies that the action is profiled (specified explicitly) by the root, but the use of *mag-* implies that the particular action may sometimes have to be deduced from semantically nominal roots by metonymy, as in *magbahay* 'build oneself a house'.[18] In other words, *mag-* is underspecified by comparison to *um-*, which can only be satisfied by roots that predicate process or action components (though they may be end states or nominals in their bare forms). *Mag-*, on the other hand, can draw attention to the processual information in almost any kind of root semantics: thing, animal, natural phenomena, inherent

property, process, action, or nominalization of action. While this process is a form of metonymy, in data from my own interviews, *figurative* metonymical uses of *PAG*- (such as *nagkàmáyan* '(they) shook hands') are rare. In *PAG*- constructions with 50 different roots taken from three transcriptions of interviews, I found only the three in (13–15):

(13) *siglahin mo ang iyon katawan sa* ***pagharap*** *sa*
energy-IRR.UF 2SG.GN SPC 2SG.DRC body DRC **GER-front** DRC
bagong direktor
new-LG director
'you have vitality (your body is energized) to face the new director' (tf3)
METONYMY: *pag*-FRONT FOR FACING FRONT

(14) *lalo na sa matatanda na kayo* ***magmano***
especially LG DRC elder LIG 2PL.SPC **IRR.AGT-hand**
'particularly to your elder you bless (or ask for blessing)' (tf3)
METONYMY: *mag*-HAND FOR ACTION OF RAISING HAND TO ELDER'S FOREHEAD

(15) *para siya* ***nagkaroon*** *ng malaking pagbutihin*
SO 3S.SPC **RLS.AGT-ST-DIST** GN big GER-good-UF.IRR
'so they can obtain a great improvement' (tf1)
METONYMY: *nag*- + DISTAL DEICTIC (RESULTATIVE SENSE) FOR POSSESSION

3. Polysemy

I have suggested that *PAG*- is underspecified by comparison to *-um-*, which is largely restricted to action and process roots, including their nominalized forms. Himmelmann showed that *mag*- combines more often than *-um-* with concrete thing roots. *PAG*- seems more apt to acquire a variety of conventionalized meanings by the process of metonymy. How does this theory accord with these observations and with the semantic proposals of Bloomfield, Lopez, and Panganiban as listed in Table 2? I will discuss each of proposed senses of *mag*- (and *PAG*- forms in general) in turn.

Table 2. Previously observed senses of *PAG*- forms

externalized effects by comparison to -*um*- forms (Bloomfield, Lopez, Panganiban)
putting into action (Lopez)
deliberate (Bloomfield)
physical exertion (Panganiban)
general by comparison to -*um*- (Bloomfield)
adds actor by comparison to -*um*- (Bloomfield, Schachter)
plural (Lopez, Panganiban)
contraposed (Lopez)
reciprocal (Bloomfield, Panganiban)
intensity or repetition (Lopez, Panganiban, Schachter)
reflexive (Bloomfield)

3.1. Externalized effects

Bloomfield, Lopez, and Panganiban all agreed that there is something externalizing about *PAG*- forms. Furthermore, Lopez spoke of a "putting into action." On the other hand, examples of internal senses of *PAG*- are not hard to find. It often appears with forms that have meanings that seem internal to the agent, or at least neutral, as in the following items from my interview files, given with glosses as they occurred in the running text:[19] *magdusa* 'her suffering', *nagiisa* '(you) are alone', *nagdi:dilamhati* 'they were grieving', *pagpanaw* 'death', *nagda:ramdam* '(you) are upset', *nagisip* '(she) thought to', *nagiba ang ugali* '(she) changed her attitude'. Several consultants agreed that *nagisip* 'AGENT thought', *nagda:ramdam* 'AGENT is ~ was upset', and *nagdi:dilamhati* 'AGENT grieves' should all be thought of as internal. The others are construable as either internal or external.

3.2. Deliberate

Most, but not all, constructions with *PAG*- imply deliberate action. If something is acted upon by an agent, as is most often the case with *PAG*-constructions, then it seems likely that this will most often be done deliberately or volitionally. But this seems to be only a statistical tendency, not a necessary sense of the prefix. Since I know of no data that would justify proposing *deliberate* as a special conventionalized sense, for the time being I will regard it as an analytic or etic category, while recognizing that it may also be a reasonable implicature in Tagalog.

3.3. Physical exertion

If some action is performed by an agent, according to the proposed core sense, then it seems likely that this will often require physical exertion. Unlike deliberation, it is a sense that was proposed by a native speaker, Panganiban. Thus, it appears that one can define a prototype sense of *PAG* as well as a category schema. The prototype is: *an agent applies physical exertion to set in motion some process profiled in the root or latent in the base conceptualization of the root*. Physical exertion is extended to mental exertion, as in *nag-aáral* 'AGENT is studying,' *nag-iba ang ugali* 'agent changed mind,' and perhaps *nag-isip* 'AGENT thought'. It may be, too, that unpleasant (difficult to bear) mental states, such as *mag-dusa* 'to suffer', *nag-da:daramdam* 'AGENT is upset', and *nag-dalamhati* 'AGENT grieves' fall into this category. Mental exertion is an extension from the prototype. This variant may account for why so many apparently "internal" senses of *PAG*- forms occur.

3.4. General by comparison to *-um-*

It is unclear exactly what Bloomfield meant by the "general" sense of PAG- forms. Since I know of no data that would justify proposing *generality* as a special conventionalized sense, for the time being I will regard it as an analytic or etic category as opposed to a category that would be recognizable to native speakers. Some evidence of generality may be seen in usages referring to environmental processes, as in (16) and (17), which appear to lack explicit agents:

(16) *ka-dalas-an* *g-in-a-gamit* *namin* *sa* *mga*
ST-frequency-LOC RLS-R1-do 1PL.EXCL.GN DRC PL
pag-ara -ara *ng* *ka-buhay-an*
GER-R2-day GN ST-life-LOC
'we often apply them to our daily lives' (tf1)

(17) *na halos* *sa* *buong* ***mag-damag***
LG almost DRC whole-LG **IRR.AF-night**
'for almost the whole night' (tf2)

3.5. Adds actor by comparison to *-um-*

Bloomfield's observation that *mag*- forms often have an extra actor in comparison to *-um-* forms was not supported by any collation of data.

Schachter (1987: 951) provided a few examples: "There are also certain regular correspondences between *-um-* and *mag-* verbs formed with the same stem, e. g. cases in which the *-um-* verb takes two arguments and the *mag-* verb three, such as: *pumasok* 'come/go into' and *magpasok* 'bring/take into', *lumabas* 'come/go outside' and *maglabas* 'bring/take outside'." I am struck by the similarity of the resultant meanings to those formed by combinations of *PAG-* forms with nouns, adjectives, and phrases. In all such cases, the construction raises the profile of an activity associated with the profile of the root. In other words, the meaning of the construction is to be found in the otherwise non-profiled elements of the base conceptualization of the root. Whereas the meaning of *-um-* merely subsumes the root profile, *PAG-* raises the profile of a secondary activity, and thereby introduces a new participant. Travis (1999) also claimed "that **pag-** assigns an external theta-role of causer as well as accusative Case."

Himmelmann (n.d.b) observed that it is roots denoting position or motion that show a regular constrast in transitivity. He compared *t-um-ayô kami* 'we stood up' to *nag-tayô kami* 'we erected a house,' concluding "the *-um-* form denotes actors who move themselves while the *mag-*form denotes an actor who moves something else." Again, this is contrary to the interpretation by Nolasco, who would perhaps translate *nag-tayô kami* 'we engaged in the activity of erecting a house'.

3.6. Plural

PAG- forms often have plural actors or effects. This seems a likely consequence of the underspecification of *PAG-* with respect to action. By being very schematic, the prefix can accommodate a variety of non-verbal and verbal roots that may lend themselves to conventionalized plural senses. If *-um-* has a core sense of internally generated action, it would be less susceptible of semantic pluralization of action. With respect to *PAG-*, one can think of plurals as a special case, a conventionalized instantiation of the core sense.

3.7. Contraposed and reciprocal

The contraposed and reciprocal are special cases of the plural, with plural actors and plural actions. Schachter and Otanes (1972: 293) listed several instances that they referred to as "directional *-um-*verbs" that are

"formed with the same base as intransitive *mag*-verbs." His examples all seem not merely directional, but also to involve a sense of confrontation:

-um-Verb	**Mag-Verb**
humiwalay 'separate from'	*maghiwalay* 'separate from one another'
lumaban 'fight with'	*maglaban* 'fight with one another'
sumalubong 'meet (someone)'	*magsalubong* 'meet with one another'

Many conventional nominal forms, such as *mag-iná* 'mother and child' appear to derive from a reciprocal sense of *mag*-. In this usage, *mag*-predicates a reciprocal relationship, though not necessarily a symmetrical one. The usage is metonymical in that it derives from the conventional roles of two people, only one of whom is profiled in the root, though there are other forms, such as *mag-kaibígan* 'friends', where the profile applies to both of the reciprocal actors.

3.8. Repetition and intensity

Constructions predicating repetition can be regarded as a special case, perhaps related to plural action and physical exertion. Intensity may derive from repetition and from the necessity for deliberation. Tuggy (this volume) has made a similar point with regard to Orizaba Náhuatl. Himmelmann (n. d. b) observed that *mag*- may co-occur with -*um*-, indicating "a very high degree of intensity". He gave the examples *mág-um-aral* 'study diligently' and *mag-s-um-igáw* 'shout (long and very loud)'. These suggest that physical or mental exertion and repetition may both be involved. In fact, it seems likely that the two notions form a gestalt by virtue of frequent association in actual experience. While the first suggests volition, the second, *mag-s-um-igáw*, can be used for the emotional shouting out of the heart.

3.9. Reflexive

Reflexive semantics in PAG- at first seemed a hard thing to understand. Why should an underspecified prefix acquire reflexive meaning, as in *magbahay* 'build oneself a house'? First, one notes that reflexive forms also occur with -*um*-, as in the clause *Ang áhas ay bumaluktòt* 'The snake doubled itself up' < *baluktót* 'crooked, curved, bent'. Both PAG- and -*um*-forms may predicate an action or process. It is often the case that an action or process has a transitive object. If the landmark, in the case of

-um-, or the secondary landmark, in the case of *PAG-* is left unspecified, and a reflexive construal is possible or likely due to common or salient occurrence in the experience of speakers, such as a snake curling up on itself, then this may emerge as a conventional sense of the form. One can also use *PAG-* + *bahay* to speak of building a house for someone else (18) or to speak of inhabiting a house (19), but these require the suffix *-an*. The agents appear unfocused in genitive phrases (*niya, ng insecto*). In (18) the participant in the *ang*-phrase becomes a beneficiary undergoer rather than an agent.

(18) *Nagbahayan niya ang kanyang asawa.*
RLS.AF-house-LOC 3S.GN SPC3 SG.DRC-LG spouse
'He built a house for his spouse'

(19) *Pagbabahayan niyan ng insecto*
PRTC-R1-house-LOC 3SG.GN GN insect
'to be inhabited by insects'

4. What about *pag-?*

Pag- is the only form that occurs in both the *-um-* and *PAG-* series. Prefix *-um-* involves an agent in a particular action or process, while *PAG-* predicates that agent, usually unspecified, sets in motion some action or process profiled in the root or latent in the base conceptualization of the root. Common to both is the action or process, and the possibility of additional participants. A schema that subsumes both is *agent involved in action or process*, but I don't think that this is the solution to *pag-*.

Bloomfield's (1917, II: 226, 231) characterization of *pag-* forms as "the abstract of action" seems apt. *Pag-* is also non-specific with respect to realis or irrealis mood, and, like the English gerund, it is non-specific and unbounded with respect to time. It is generally distributive or habitual, as in the escaping of captives (20) and the dog's barking (22). Juan's announcement (21) appears to be realis and perfective, but it might also be translated as *Juan's announcing*, making it unbounded within the time frame of some social event.

Pag- frequently occurs in *ang*-phrases, giving them the feel of a nominal, but it occurs also in *ng* and *sa* phrases. Few usages have explicit agents. When agents appear, they are found in genitive phrases (20 – *nang mangá bíhag,* 21 – *ni Hwàn*). *Pag-* also lacks voice (Himmelmann n. d. b). Items (20–22) are from Bloomfield (1917, II, §§ 350, 351).[20]

(20) *Ang* ***pag a ala ng mangà b hag*** *ay pinarùrusáhan ng kamàtáyan.*
‘The escaping of captives is punished with death.’

(21) *Ang* ***pagtata ag ni H àn*** *ay hindí márinig ng karamíhan dahilàn sa mahína nya ng tinìg.*
‘Juan’s announcement was not audible to the majority, owing to his weak voice.’

(22) *Ang* ***pagtatahòl ng aso ng itò*** *sa manga nagdàdàánan ay masamà ng ugále’.*
‘This dog’s way of barking at passers-by is a bad habit.’

Data from discussions with consultants bear out this pattern (24, 25). Very few usages of *pag-ROOT* have explicit agents. The rare instances appear in genitive phrases (*natin* in 23, *ng ahas* in 24):

(23)

ngayon	*gusto*	*ko*	***pag-usap-an***	***natin***	*ang*	*mga*	*pamaahiin*
today	like	1S.GN	PRTC-discuss-LOC	1PL.INCL.GN	SPC	PL	omens

‘Today I would like to discuss omens or superstitions with you.’

(24)

gaya	*ng*	***pag-sulpot***	***ng***	***ahas***	*sa*	*loob*	*ng*	*bahay*
like	GN	GER-emerge	GEN	snake	DRC	inside	GN	house

‘for example the appearance of the snake inside the house’

Based on an extensive analysis of the morphology of Tagalog roots, Potet (1995) glossed *pag-* as ‘action’. He also identifies a form *-ag-*, which he glossed as *action flowing from or pursuant to what the radical implies*. Potet used the term radical for a combination of root, which is always one syllable, plus affix or second root. Potet’s definition of *-ag-* is very close to the notion I have suggested of *setting in motion a process latent in the stem or the root.* Unfortunately, he does not indicate whether *pag-* is etymologically related to *-ag-*. But if we assume that they are related, then we can propose the following schematic senses for the elements of the *PAG-* series:

p- unspecified mood, unvoiced, nominalized
m- irrealis, agent voice

n-	realis, agent voice
-ag-	action profiled or latent in stem or root
p-ag-	unprofiled agent sets in motion a process profiled or latent in stem or root; indefinite with respect to mood; nominalized
m-ag-	irrealis: an agent sets in motion a process profiled or latent in the stem or root; conventional semantic elaborations include exertion, distributive, plural, reciprocal, and reflexive
n-ag-	realis: an agent is setting in motion (or has done so) a process profiled or latent in the stem or root; conventional semantic elaborations are the same as for *m-ag-*

This framework is consistent with proposals of Schachter (1987) and Ricardo Nolasco[21] that *m-* and *n-* are prefixes that combine with *pag-*, either by assimilation (Schachter) or replacement (Nolasco).

5. Larger constructions with *PAG-*

The discussion so far has considered only constructions of the form *PAG*-ROOT, omitting from consideration such constructions as *PAG-pa-___*, *papag-___-in*, *makipag-___*, *PAG-ka-___*, *P-in-AG-___*, *ipag-___*, and *PAG-___-an*. If the analysis of *PAG-* is valid, then these more complex constructions should be understandable in terms of their compositional values or as motivated extensions from those compositional values. I will consider just a few examples from my data.

(25) *sa halip na magaral ay*
DRC instead LG IRR.AF-study PM
makiki-pag-relas on
IRR.APT-SOC-R1-PRTC-relationship
'instead of studying **they have relationships**' (tf1)

In (25), *makiki-* is an irrealis aptative imperfective social form, with a sense something like "they attempt with each other." This is perfectly consistent with the schematic sense of *pag-* as abstract, and perhaps reciprocal, action, though reciprocity is also supplied by the root. Thus, a very formulaic gloss would be 'they attempt to activate relationships with each other'.

PAG- combines with *pa-* to produce interesting conventional meanings, both reflexive and non-reflexive. In (26), the reduplication of *pa-* is imperfective. If *pa-* is undergoer oriented, then *nag-* functions as in Figure 3, providing the agency and profiling the process that results in the state of looking good. By cultural convention, that process is understood to be grooming. Leaving aside the imperfective aspect, the derivation is *nag-*[*pa-gwapo*]. If *pa-* is taken to be aptative rather than undergoer oriented, then *nag-pa-gwapo* would yield a meaning something like 'make oneself able to look good', which also fits the translation. A similar, but non-reflexive example appears in (27) where the constituent construction *pa-dulot* predicates that something is caused to be served **to or for the agent**. As in Figure 2, *nag-* profiles the process that accomplishes that result. Here the construction ***nagpa-*** is understood by convention to be the ordering of the maid to serve.

(26) *nag-pa-pa-gwapo*
nag-R1-pa-good.looking
'grooming oneself to look good'

(27) *nag-pa-dulot ako sa katulong ng merienda sa mga*
nag-pa-serve 1S.SPC DRC maid GN snacks DRC PL
bisita
guests
'I ordered the maid to serve some snacks to the guests.'
(Guzman 1978: 176)

In (27), the root *dulot* is glossed as 'serve'. Panganiban (1972: 388–389) glossed it as a noun meaning 'offering' or 'food served in a platter or dish-tray to each of the persons at a meal'. Therefore, in Figure 3, I have given *dulot* a nominal profile. Whether processual or nominal, the profile of *dulot* is not critical here, because it is overridden by the gerund *pa-* which derives a nominal stem. The process that the metonymical sense of *nag-* is selecting and profiling is not the serving itself, but some process latent in the base of the constituent construction *pa-dulot*. This process is, by cultural convention, the ordering of someone (the maid in this case) to serve, which *pa-dulot* inherits from *dulot*. To order someone to serve is to set in motion the serving of food. It is interesting that the primary undergoer-landmark of the nominal stem *padulot* appears in the genitive phrase (*ng merienda*). The landmark of *nag-* appears in a directional phrase (*sa katulong*), as do the beneficiary guests (*sa mga bisita*).

Now consider examples (28) and (29). Panganiban (1972) defined *bihis* as 'one's clothing' or 'the way or manner one is dressed'. In (28) we see a normal usage of *nag*- to profile the action of dressing, which is latent in the base of *bihis*. Thus, the usage in (28) is much like *mag-bahay* 'build oneself a house'. Item (29) has *pag*- with an infixed -*in*- and there is also a locative suffix. The infix -*in*- is realis. The suffix -*an* has undergoer or goal focus. The construction makes sense if we start with *pag-bihis* 'changing (clothes)' and give it a realis sense with -*in*-, resulting in the stem *p-in-agbihis* 'AGENT changed clothes'. This construction retains the metonymy of *pag*-. Infix -*in*- confers realis mood. The suffix -*an* places the location in focus (*ang banyo*).

(28) *Nag-bihis si Juan sa banyo.*
changed the John to bathroom
'John changed in the bathroom.'
(Naylor 1975: 42)

(29) *P-in-ag-bihis-an ni Juan ang banyo.*
was-changed-in by John the bathroom
'The bathroom was-changed-in by John.'
(Naylor 1975: 42)

6. Conclusions

The PAG forms constitute a single category in that *mag*- and *nag*- have the same range of meanings and complements, differing only in mood, while *pag*- can be regarded as the more abstract form, lacking voice, mood, and temporal bounding. The schema that subsumes all the PAG forms is *action or process that is either profiled in the root or stem or latent in its base*. The schema lacks volition, but it does subsume both *physical and mental exertion*, both of which imply the notion. It also sanctions a variety of mutually interrelated senses termed *distributive*, *intensive*, *reflexive*, *reciprocal*, and *contraposed*. Himmelmann (n. d. b) remarked that the contrast between *bumilí* 'buy' and *mágbili* 'sell' is "much quoted, but unique." But this usage of *mag*- fits the proposed schema for *PAG*-forms, because selling is latent in the base of *bilí*, and in fact one can think of selling as the setting in motion of buying.

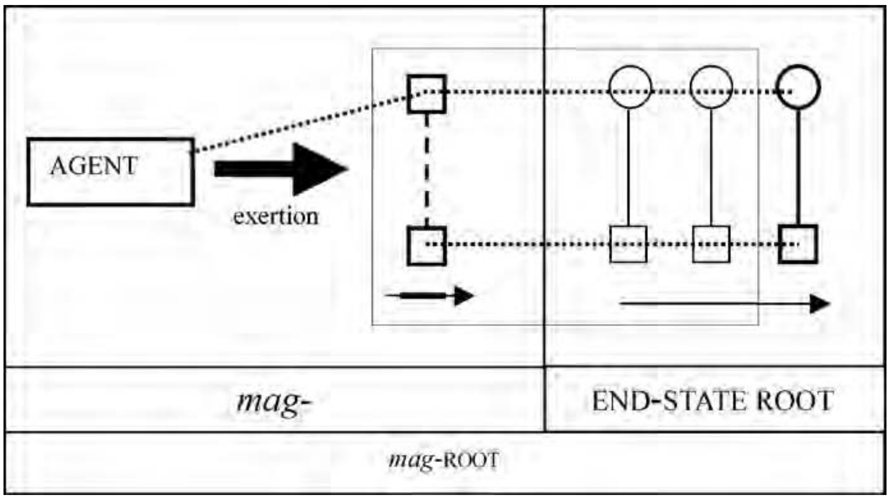


Figure 1. Prototype sense of *mag*-ROOT or *nag*-ROOT.
This root profiles a state resulting from a process.
The construction takes the profile of the prefix, which is a process. Example: *nag-da:dala* 'agent is ~ was carrying' < *dalá* 'carried, taken away'. Figures drawn in bold lines are profiled. The end state is excluded from the conceptualization of *nag-da:dala*.

The hypothetical prototype meaning for PAG-forms is *an agent applies physical exertion to set in motion a process that is profiled in the root* (Figure 1). A variant is *an agent applies physical exertion to set in motion an action that is latent in the base conceptualization of a root or stem.*

The schema and its variants have at least four grammatical subtypes based on the type of stem:

(a) *a root that predicates a concrete thing* (Figure 2),
(b) *a gerund-stem* (Figure 3),
(c) *an adjectival stem* (not diagrammed), or
(d) *a phrase-stem*, such as *magandang gabi* 'good evening' (not diagrammed).

PAG has a complex and reasonably well-motivated category structure that is illustrated in Figure 4. It seems reasonable to treat *m*- and *n*- as prefixes (with restricted environments), since they appear also in PA- and PAN-forms. Whether the residuum is *pag*-, as Schacter (1987) and Nolasco have proposed, or a derivative of -*ag*- (Potet, 1995) is still unresolved.

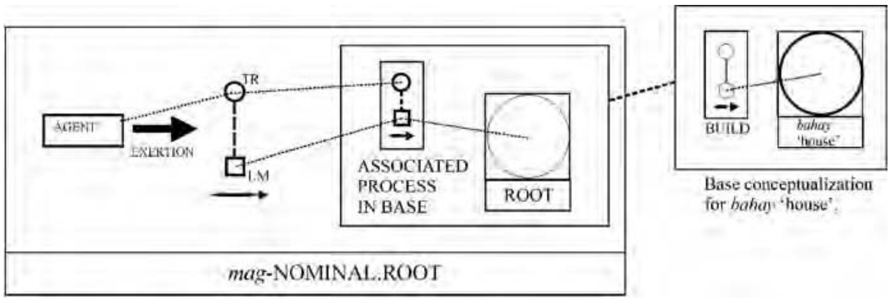


Figure 2. Metonymical construction of *mag-bahay* 'build oneself a house'. *Mag-* may profile any process associated with the root or stem. If the root is verbal, *mag-* normally profiles the primary process. However, the larger base conceptualization may have one or more associated processes, particularly if the root or stem profiles a nominal or a final state (See Figure 3). The *mag-* construction raises the profile of one of the available base processes to instantiate the schematic process profiled by the prefix. Figures drawn in bold lines are profiled. The reflexive voicing is not illustrated.

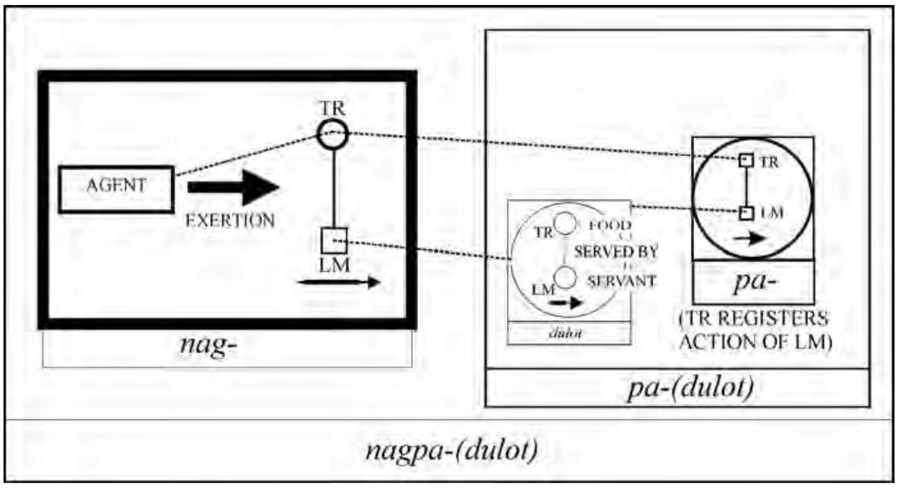


Figure 3. Metonymical construction of *nag-pa-dulot* 'order to be served' < *dulot* 'offering' or 'food served in a platter or dish-tray to each of the persons at a meal.' *Pa-* is diagrammed as a schematic nominal with an experiencer trajector. *Pa-dulot* inherits the nominal profile, but *nag-* is the final profile determiner. Constituency is ambiguous. Not diagrammed here is the process of verbal ordering, which would correspond to the arrow labeled "exertion". The conceptualization is complex and bidirectional, with the agent who sets the process in motion also being an experiencer in the sense that one gets food to be served by ordering it.

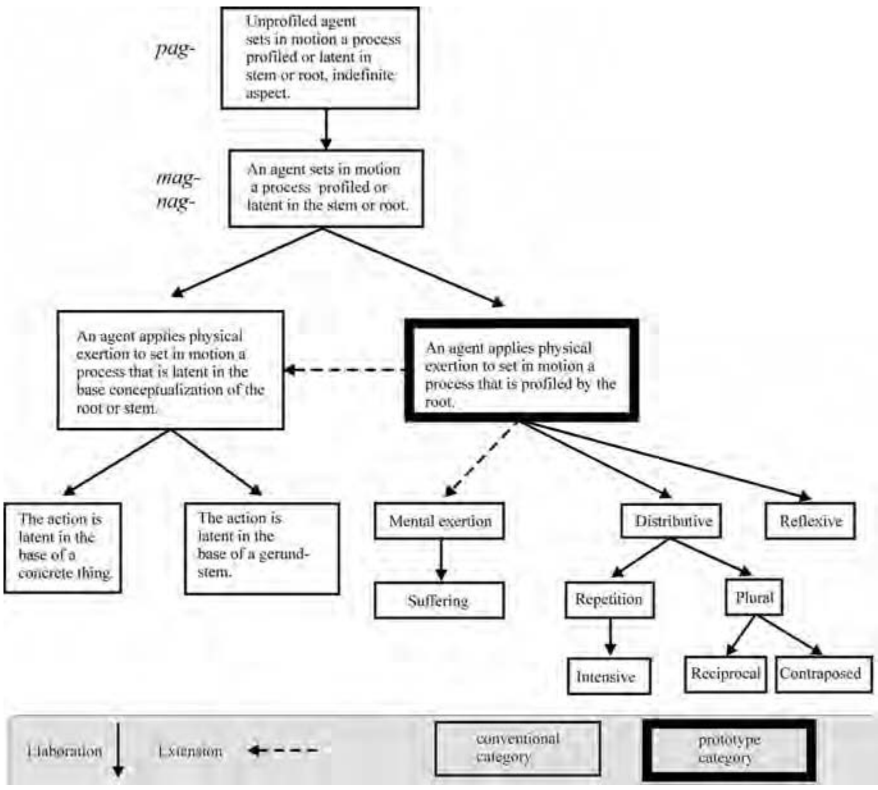


Figure 4. The Tagalog category PAG- (*mag*- is irrealis, *nag*- is realis).

PAG, and -*ag*- have similar metonymic functions in that they both raise the profile of actions latent in the semantic bases of their roots. The existence of the series PAG–, PAN-, and *pa*-, together with the -*ag*- form identified by Potet, argues for a *p*- prefix.

While it was never the purpose of this paper to differentiate PAG- from -*um*-, a distinction did emerge. The infix -*um*- appears to require that its roots explicitly predicate a process or action that is undertaken or experienced by an agent. PAG- conventionally evokes latent processes or actions that are part of the base conceptualization of the root. This allows it to combine with roots and stems that have more varied semantics than those that combine with -*um*-.

The category PAG- is only partially explored, especially in its semantic relations to other affixes. The concepts of cognitive grammar have proven

sufficient for analysis of the grammar of *PAG*- forms as they appear in relatively simple lexemes. The analysis also works for more complex lexemes with *PAG*- constituents and multiple affixes, such as the terms *magpa-apekto* and *magpaunlad* in the opening quote, explaining these constructions and elucidating translations where purely syntactic approaches have merely collated possible constructions.

Notes

1. This is a revision of a paper prepared for presentation to the session on Cognitive Linguistics and Non-Indo-European languages at the 6th ICLA Conference in Stockholm, July 10–16, 1999. The research on which this paper is based was supported by a Site grant from the University of Nevada, Las Vegas for a study of "Popular Discourse in Manila and Las Vegas", by the Department of Anthropology, and by a grant from the Faculty Travel Committee. My understanding of the topic has benefited from discussions with Ricardo Nolasco and Videa P. de Guzman. Lawrence Reid and Kenneth Cook read the manuscript and made useful suggestions. Flo Endrino and Kathrina Marfori worked as translators on the project. Steve McCafferty, Tony Miranda, Roy Ogawa, and Jennifer Thompson made helpful comments on an early presentation. I am indebted to Nikolaus Himmelmann for generously sending me his papers in progress.

   ABBREVIATIONS: AF = agent focus, active voice; DIST = distal deictic; DRC = directional; GN = genitive; GER = gerund; IMP = imperative; IRR = irrealis mood; LG = ligature; LOC = locative undergoer, trigger, or focus; MED = medial deictic, near addressee; NEG = negative; PL = plural; PM = predicate marker (inverse); PRTC = participle; PRX = proximate deictic; PF = patient focus; RLS = realis mood; R1 = imperfective reduplication; R2 = moderative reduplication; S = singular; SOC = social; SPC = specific, corresponding to *ang* trigger or focus; ST = stative; UF = undergoer focus; 1, 2, 3 = first, second, third person; > = metaphorical or metonymical extension.

   The acute accent indicates stress, which may be realized as a higher tone or vowel length (example á) (Himmelmann n. d. b). Stress is marked only where it occurs somewhere other than the penultimate syllable, but the notation is not consistent among all the authors cited in this paper, and information on stress is not always available. In Tagalog transcriptions, the grave may occur on the final syllable where it signifies a glottal stop (example à = [aʔ]) but in the examples from Bloomfield (1917) it signifies secondary stress. The circumflex generally signifies final stress followed by a glottal stop (example â = [áʔ]).
2. From "Tagumpay ang scoop awards night." *Scoreboard Sports and Leisure Magazine*, IX (428), Feb 1–7, 1999, p. 30.

Hinamon ni Senador ang mga namumuno sa sports media at
challenge GN senator SPC PL RLS.AF-chief DRC sports media and
mga kasali rito
PL participant PRX.DRC
'Senator challenged the leaders in the sports media and those who are involved

na huwag magpa-apekto *sa mga isyung sumasalungat*
REL NEG.IMP IRR.AF-PRTC-effect DRC PL issue-LG RLS-R1-contrary
sa progreso ng sports,
DRC progress GN sports
not to allow the influence of issues that conflict with the progress of sports,

bagkus ay patuloy na magkaisa *sa mga*
all.the.more PM PRTC-continue LG IRR.AF-ST-one DRC some-LG
ganung uring pagbibigay *parangal* SA MGA *atletang*
kind-LG PRTC-R1-give respect drc pl athlete-LG
moreover they should continue to unify in ways of paying homage to athletes

nagbibigay ng karangalan sa bansa, pati na rin
RLS.AF-R1-give GN ST-honor-LOC DRC country including LG also
sa mga indibidwal o grupong
DRC PL individual or group
[who are] giving honor to the country, including to individuals or groups

tumutulong magpaunlad *ng imahe[n] nito.*
AF-R1-help IRR.AF-PRTC- advance GN image PRX.GN
helping to advance these images.'

The senator quoted was Robert Jaworski, who is also the most revered basketball player in the Philippines, recently retired from Ginebra San Miguel of the PBA (Philippine Basketball Association).

3. Himmelmann (1999) used the term *orientation* in preference to voice, because Tagalog actor and undergoer orientations are significantly different from passive and active in Indo-European languages. I use the term *voice* for the general phenomenon, because the usage for Tagalog dates back at least to Bloomfield (1917) and because both Tagalog and I–E voice have to do with the relative prominence of agents and undergoers. For a history of studies pertaining to Tagalog voice, see Guzman (1987).
4. Himmelmann (n. d. b) glosses the *ng* form of personal pronouns and personal names as possessive because they cannot replace the *ng* forms of non-human undergoers in actor-oriented expressions.

5. On the inherent relationality of verbs, see Langacker (1991: 19–23).
6. Regarding *ma*- forms, Himmelmann (1999, n.d.b) makes a semantic distinction between "stative" and "potentive". In many cases they predicate abstract temporal events with lack of control by the focal participant, which is variously an experiencer or patient. *Pa*- is often referred to as "causative" in the sense that the process or action is something that happens to a non-volitional focal participant (Schachter 1987).
7. Agents of *pag*- and *pa*- constructions occur in genitive phrases. *Pag*-, *paN*-, and *pa*- constructions occur as predicate bases in *ang*-phrases and they occur preposed in *ay* constructions.
8. Nolasco, Ricardo, personal communication, 2000.
9. The -*um*- also has a realis sense, which Ricardo Nolasco traces to an obsolete Tagalog form -*ung*-.
10. Space limitations precluded including the data and tables on which this statement is based.
11. Ricardo Nolasco, personal communication, March 13, 2001.
12. Words in [ ] added. Lopez's tracing of *mag*- to existential *may* seems highly unlikely in view of the aforementioned derivation proposed by Nolasco, but it may reflect an emergent semantic linkage.
13. Reduplication of portions of a verb stem also has intensifying semantics in Nahuatl (Tuggy, this volume) and *Snchitsu'umtsn* (Coeur d'Alene) (Ivy Doak. 1997. *Coeur d'Alene Grammatical Relations*. Ph. D. Thesis, The University of Texas at Austin).
14. Schacter uses the term *trigger* for what others call *focus*, thus DT (dative trigger), PT (patient trigger).
15. This usage of reduplication has a parallel in Orizaba Náhuatl (Tuggy, this volume).
16. Ricardo Nolasco, personal communication, January 2000.
17. See Himmelmann (n. d. b) for a discussion of the undergoer voice affixes.
18. See previous footnote.
19. Examples with sources *tf1*, *tf2*, or *tf3* refer to files of interviews with Tagalog speakers in Las Vegas. Descriptions of the files and a concordance program with a web page interface are available at <http://www.nevada.edu/~gbp/concdocs>.
20. I have respelled Bloomfield's genitive *nang* with the more modern conventional *ng*, and changed *ka t* to *ka't*.
21. Personal communication.

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Conceptual structure of numeral classifiers in Thai

Douglas Inglis

1. Introduction[1]

As the term suggests, *numeral classifiers* (henceforth classifiers) have a twofold job description. Lexically, they classify or categorize the world for the culture that draws on them. Grammatically, they provide a means of counting or in other ways quantifying objects or things that they categorize. These roles are well documented (Allen 1977; Conklin 1981; Denny 1986; Haas 1942; Hundius and Kölver 1983; Jones 1970; Placzek 1978; Matsumoto 1993).

This paper draw on insights from both Lakoff and Langacker to describe one facet of the lexical categories that Thai speakers exploit to talk about their world. In using Lakoff (1987) as a methodological starting point, I will take a pair of morphemes from the Thai classifier system (namely *bay/lûuk*) as part of a base model. This model is a radial category for which I will specify the central members, distinguish important contrasts among those central members, provide semantically motivated links between central and peripheral members of the category, and finally plot the different conceptual structures used by each separate category to alternatively classify a subset of overlapping container-like objects. These complex categories will then be viewed in terms of a schematic network along the lines of Langacker (1987: 369–386)[2], the purpose of which is to introduce *schema* as a necessary construct for describing the grammatical structure of the classifier. This grammatical structure is not, however, purely syntactic but also conceptual. An issue central to this descriptive paper is that under a single theoretical framework, Cognitive Grammar offers an elegant account of both lexical and grammatical structure, accounting for a complex array of data characteristic of classifiers in general.

2. Introduction to the numeral classifier phenomenon

Many classifiers have developed their categorizing function from nouns. Wang seeks to provide semantic and cultural motivation for the develop-

ment of Chinese classifiers coming out of the communicative need to disambiguate singular and multiple measure terms when quantifying an object (1994: 179). It is shown in Chinese that measure words are derived from nouns by reduplicating a word form to count, for example, the number of beads in a jade necklace. This measure term was imprecise as to number and with the emerging use of commerce acquired an exact quantity. The emerging function of the classifier was thus not to categorize but to quantify. The function of categorizing objects developed along with the need to quantify increasingly diverse objects. Once this categorizing function became more conventionalized, compound nouns (or the 'class term' in Thai studies) became a major source for the rapid development of new classifiers (Delancey 1986: 440).

A class term is a compound word in which the first element in the compound exists as its own classifier, i. e., the higher taxon in the compound. For example, *mí lûuk-bɔɔn-sǎɔm lûuk*, which is literally, '[there] exists *round-ball* three clsf:round-thing' Here *lûuk-* combines with *-bɔɔn* to form the noun 'ball'. The word *lûuk* is both the hypernym in the taxonomic relationship with *-bɔɔn* and the syntactic classifier quantifying 'ball'. Delancey (1986: 439) further demonstrates (for Thai) that classifiers form a continuum ranging from a pure noun, which exhibits no classifier behavior, to a pure classifier, which manifests no noun behavior. The class term is a middle ground where the first element in the compound functions as a noun and also as its own classifier. In this paper I show that Cognitive Grammar, as a theory that combines conceptual symbolic units in schematic relationship to each other, begins to satisfy the descriptive demands of this type of semantic/syntactic continuum. In order to understand the categorization involved, it is important firstly to know that at the lexical level, both *bay* and *lûuk* also serve as class terms for a number of objects (nouns).

2.1. The radial structure of *bay*

Using Delancey's continuum, *bay* functions as a class term and a classifier but not as a noun. In Thai the word for 'leaf' is the class term, *bay-máy* [literally, leaf-tree]. You therefore quantify two leaves in the following classifier construction, *bay-máy sɔ̌ɔŋ bay* [literally, leaf-tree two clsf:leaf-like-thing]. The relationship between the classifier *bay* and its noun *bay-máy* is one of elaboration. The schematic classifier 'leaf-like-thing' is conceptually enriched by the lexical noun 'leaf' with all of its

semantic detail. The class terms in (1a–b) represent specific kinds of leaves. The first element in the compound is the higher taxon 'leaf' while the second element is the kind of leaf it is. A simple noun for 'grass' is shown in (1c). All of the examples in (1) take *bay* as their classifier and represent the prototypical members in the 'leaf-like' category.

(1) a. *bay-chaa* b. *bay-tɔɔŋ* c. *yâa*
leaf-tea leaf-banana wrap 'grass'
'tea leaf' 'banana leaf'

Other flat, thin objects are also categorized with *bay*.[3] The examples in (2a–c) are similar in flatness to the leaf but deviate from the prototype in leaf-like shape and/or degree of rigidity.

(2) a. *bàt* b. *tǔa* c. *caan* d. *tɛɛŋmoo* e. *rákam*
'card' 'ticket' 'plate' 'watermelon' 'a Thai fruit'

The 'card' and 'ticket' in (2a–b) are members of the leaf-like category due to the iconic thin, flat relation with 'leaf'. They are similar in degree of flatness and rigidity but differ in the shape of a leaf from the prototypical members in (1). The noun 'plate' in (2c) is flat like a leaf but being made of inflexible material deviates in degree of rigidity. The fruit in (2d–e) are part of the 'leaf-like' category not at all by means of any iconic flatness or flexibility to the leaf but rather via an association the leaf has to the "fruit-bearing" plant or tree.

Next, the 'sail' in (3a) reflects another extension of 'leaf', thus forming a radial category a là Lakoff. 'Sail' retains a degree of thin, flatness but deviates in being made of cloth-like material. Likewise other extensions of 'leaf' are found in (3b–e), where 'document', being leaf-like in shape, is a generic piece of paper containing written information. 'Receipt', 'dispatch' and 'invoice', being specific types of documents, differ conceptually by making salient the type of written content of the paper. As a lexical set their semantic distinction rests in this difference of written content.

(3) a. *bay-rɯa* b. *èekàsǎan* c. *bay-sèet*
leaf-boat 'document' leaf-finished
'sail' 'receipt'

d. *bay-bɔ̀ɔk* e. *bay-sòŋkhɔ̌ɔŋ*
leaf-tell leaf-send things
'dispatch' 'invoice'

Two discrete radial extensions from 'plate' can also be observed. First, 'plate' as a flat and round shape motivates a semantic iconic link with objects such as propellers, *bay-phát* [leaf-blow] 'airplane prop' and *bay-càk* [leaf-wheel] 'boat prop', which are also flat, round and rigid. Deviating from a round and rigid shape but maintaining the feature flat, cushions are then accommodated in this category in the example, *bɔ̀* 'cushion'. Thus the flat thin shape becomes a more general broad shape[4].

A second radial extension from 'plate' is observed in a lexical set, where *thûay* 'cup', *kɛ̂ɛw* 'glass' and *chaam* 'bowl' all share *bay* as the classifier. The members in this set do not have the conception of flatness but rather receive an association via the plate to now include other objects in the table setting, such as 'bowls', 'cups' and 'glasses'. These small beverage containers then extend to include larger liquid containers such as *kràbɔ̀ɔknáam* 'thermos' and *kràtìknáam* 'canteen'. The next members of this extension include the non-beverage, decorative jug and jar, *yìàk* 'decorative jug' and *lǒo* 'decorative jar'. These deviate from a table setting association found in cups and glasses, but form a link to a more general container, such as, *klɔ̀ɔŋ* 'box', and other larger storage containers, *kràsɔ̀ɔp* 'sack' and *laŋ* 'crate'.

This radial complex is thus constituted by several chains such that the peripheral members deviate quite drastically from the central members of the category.

2.2. The radial structure of lûuk

The category *lûuk* is similar to *bay* in several ways. First, *lûuk* reveals a radial structure, albeit one without the far ranging deviations between peripheral and central members that *bay* portrays. The *lûuk* concept maintains a closer affinity to its prototypical round, globular mass shape.

Secondly, *lûuk* has class term objects for which it classifies but unlike *bay*, it stands alone as the noun with the meaning 'child' or 'offspring'. Therefore, along the Delancey continuum, *lûuk* functions as a noun, as a class term for noun compounds and as a classifier.

There are actually three classifiers used for the *lûuk* category. Where *lûuk* refers to humans as in (4) and (5), *khon* is the classifier, *lûuk sɔ̌ɔŋ khon* 'child two *clsf*'. For animals and inanimate objects, *tua*, and *lûuk*are respectively used (*lûuk-mɛɛw sɔ̌ɔŋ tua* 'kitten two *clsf*' and *sàparót sɔ̌ɔŋ lûuk* 'pineapple two *clsf*). These three subcategories each reveal the semantic notion of a parent/child relationship in their conceptualization.

Representative data in the human subcategory is shown in (4) and (5).

(4) a. *lûuk* 'child/offspring'
b. *lûuk-chaay* child-male 'son'
c. *lûuk-sǎaw* child-female 'daughter'

(5) a. *lûuk-nɔ́ɔŋ* child-younger 'subordinate/follower'
b. *lûuk-bâan* child-village 'villager'
c. *lûuk-câaŋ* child-hire 'employee'

The nouns in (4) embrace a direct parent/child kinship relationship, whereby the child is by nature subordinate to its parent. The nouns in (5) deviate slightly by removing the kinship semantic link. This creates a more general subordinate relationship reflected as a follower of a leader in (5 a), as a villager who is under the authority of a headman in (5 b), and an employee in service to his employer in (5 c). The examples in (5) invoke no implicit kinship relation.

Data in the animate and inanimate categories are shown in (6) and (7) respectively.

(6) a. *lûuk-mɛɛw* offspring-cat 'kitten'
b. *lûuk-mǎa* offspring-dog 'puppy'

(7) a. *sàparót* 'pineapple'
b. *mámuâŋ* 'mango'
c. *tɛɛŋmoo* 'watermelon'

As in (4), the direct parent/child kinship relation is salient in the conceptualization between a parent animal and its offspring in (6).

The subcategory we are most concerned with here focuses around the inanimate objects that employ *lûuk* as the classifier in (7). The word for 'fruit' is the class term *lûuk-máy* [literally, fruit-tree]. It is evident, at least diachronically, that this class term for fruit has derived from the parent/child conceptualization, the tree and fruit being the parent and progeny respectively. This is a point to be further described in section 3.1 below. The Thai speaker probably views *lûuk* in this inanimate context as merely 'fruit' rather than progeny. That is, he views 'fruit' as a fruit-like object just as 'leaf' is a leaf-like object in section 2.1 above. The examples in (7) represent specific kinds of fruit and help us pinpoint the central members of this category.[5]

Two distinct radial extensions branch out from the prototype in (7). The first is reflected in the subordination concept and applies to inanimate pairs of entities such as lock and key where 'key' *lûukkuncɛɛ* [child-lock] is subordinate to 'lock' *mɛ̂ɛkuncɛɛ* [mother-lock]. Other examples are 'button', *lûuk-dum* [child-button] and 'spark' *lûuk-fay* [child-fire],which is subordinate to a button hole and fire respectively.

The second extension reflects iconically the fruit-like shape of the prototype. It adapts the shape from an imperfect oblong fruit shape to the more perfect sphere consistent in balls. The objects in (8) are all types of balls including a non-compounded ball used in Thai sport (8 b), edible balls (8 c), and solid balls in (8 d–e) used for bearings and gun shot.

(8) a. *lûuk-bɔɔn* round-ball b. *tàkrɔ̂ɔ* 'takraw' c. *lûuk-chín* ball-piece 'meatballs/fishballs'

d. *lûuk-dòot* 'lead ball' e. *lúuk-praay* 'shot for a shot gun'

A natural extension of (8 e) 'shot for a shot gun' is *lûuk-pɨɨn* [ball-gun] 'bullet/cartridge/shell'. However, the object 'bullet' no longer retains a spherical round-like shape that is found in lead balls and gun shot. It deviates to a cylindrical shape. Other cylindrical things include *lûuk-ránât* [ball-chime] chimes similar to a xylophone, and various elongated, rattan fish traps, *lɔ̂ɔŋ*. For these cylindrical examples the category has deviated to an elongated shape.

Another extension from ball-like shape includes the non-compound examples found in (9), *rábə̀ət sɔɔ̌ŋ lûuk* 'two explosion'.

(9) a. *rábə̀ət* 'explosion' b. *lommarasǔm* 'monsoon' c. *khlɨ̂ɨnthalee* 'ocean wave'

Made up of scattered matter, swirling weather and water particles instead of solid substance, the examples (9 a–c), 'explosion', 'monsoon' and 'ocean wave' reflect a semantic link to a more general compact, globular visage, deviating only in constitution. Finally, this more generalized concept of *lûuk* extends distinctly to a terminal set of objects in this category chain shown in (10). Each one of these nouns employ *lûuk* as their classifier.

(10) a. *kɔ̀ɔŋ* b. *kràsɔ̀ɔp* c. *laŋ*
'box' 'sack' 'crate'

The objects in (10 a–c), 'box', 'sack' and 'crate' deviate from the spheric, round shape but retain the more generalized conceptualization.

The categories, *bay* and *lûuk,* therefore reflect a complex semantic category that motivates a coherent lexical structure within the grammar of Thai.

2.3. The role of schematic networks

Langacker (1987: 373) proposes a category structure in which a prototype and its variants together constitute a schema. This structure is adapted and shown in Figure 1.

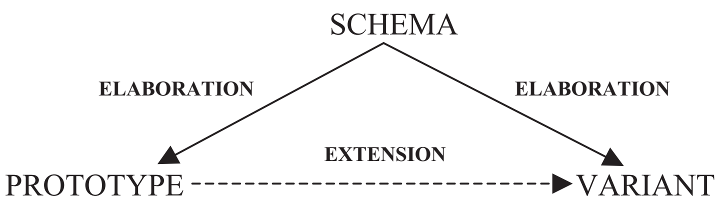


Figure 1. Category schematic from Palmer (1996: 97)

A categorizing judgement (or comparison act) exists between a prototype and its variant such that the variant is deemed similar enough to the prototype to motivate inclusion within the category. The schema, as a third cognitive entity, enters into this categorization judgement as the abstract representation of this perceived similarity between the members. Two relationships ensue from this schematic, extension shown with the dashed arrow and elaboration shown with the solid arrow. The prototype is related to its variant by extension, which is based on things such as the semantically motivated links discussed in section 2. The schema is related to all members of the category via elaboration, such that, the schema is filled in with the various semantic detail of any of its particular members.

A schematic network results when many individual schematics form a complex category. This is shown in regard to *bay* and *lûuk* in Figure 2.

As the prototype of the category extends horizontally to include more peripheral variants the level of abstraction increases vertically to capture the semantic expansion of the category. The classifier is the schema and

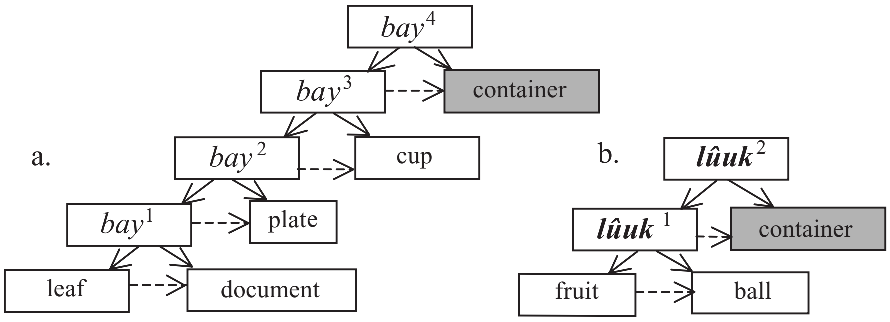


Figure 2. Schematic network of ***bay*** and ***lûuk***

becomes semantically more general as the category expands to include more variation. In Figure 2 a the schema bay[1] reflects the relationship between leaf and document as 'flat, leaf-like'. At the next level 'plate' becomes the extension of the schema *bay*[1], a 'flat, leaf-like' object. In order to accommodate 'plate' as a 'flat, leaf-like' object, *bay*[2] generalizes to become 'flat, plate-like'. This generalization process continues to include *bay*[3] 'table setting-like' and finally *bay*[4], 'container-like'.

For *lûuk* in Figure 2 b, the first schematic unit is 'round, fruit-shaped' and subsumes extensions into the domain of artifacts used in sport. At the next level, *lûuk*[2] is schematic to the 'round, fruit-shaped' schema, *lûuk*[1], and its extension which is 'container'. This second level schema is generalized as 'compact, globular'. A final observation is that 'container' uses either *bay* or *lûuk* as the classifier, highlighted in Figure 2. Each classifier usage for container, however, is motivated by a separate conceptual structure.

The schematic structure described here enables the classifier and noun to enter into larger grammatical constructions and provides the theoretical foundation in which to describe quantification.

3. Establishing the constraints of classifiers

One of the purposes of the foregoing discussion of classifiers is to establish the polysemy that holds between the noun and a classifier. These two are indeed related diachronically via a process of grammaticalization, i. e., a classifier derives from a noun and synchronically via extended relationships of association , a classifier for 'fruit' is related to the classi-

fier for 'monsoon'. They share semantic features in such a way that the average Thai speaker can connect the two.[6]

Traditionally the job of quantification has mostly been analyzed in the literature as a purely syntactic construct bereft of meaning[7] (Lehman 1979; Hundius and Kölver 1983). However, in this section I suggest that even in this highly syntactic context the classifier is a unit that has meaning. It is this intrinsic semantic conceptualization that holds for all classifiers characterizing it as a unified quantified semantic structure within the grammar.

Thai joins many other languages, especially within Mainland Southeast Asia, to make up the well-attested typology of *numeral classifier* languages. This is because in these languages a classifier is obligatory in expressions of quantity (Allen 1977: 286). These languages divide into two main groups as defined by the differential word order within noun phrases employing classifiers (Jones 1970: 3). Type I, the largest group (distributed geographically), has the pattern numeral-classifier-noun and includes Chinese and Vietnamese. The second group, Type II, patterns as noun-classifier-numeral and includes Thai and Burmese. When expanding the noun phrase to include adjectives and demonstratives five subtypes emerge as summarized from Jones (1970: 4–5) in Table 1.

Table 1. Noun phrase word order in Southeast Asian languages

Type I A	Demonst	Numeral	Classifier	Noun
Type I B	Numeral	Classifier	Noun	Demonst
Type II A	Demonst	Noun	Numeral	Classifier
Type II B	Noun	Numeral	Classifier	Demonst
Type II C	Noun	Demonst	Numeral	Classifier

In all five subtypes it is significant that the numeral and classifier appear as a close-knit unit. They are contiguous in all five types of classifier constructions. This helps establish the classifier as an obligatory syntactic link between a noun and a numeral.[8]

3.1. Problems presented by classifiers

Typical usages of the classifiers are illustrated in sentences (11–13) and are intended to highlight particular analytical problems. Note the different classifiers used.

(11) *phǒm mii tɛɛŋmoo sɔ̌ɔŋ lûuk*
I have watermelon two clsf:round
'I have two watermelons'

(12) *khun mii lûuk kìi khon*
you have child how-many clsf:human
'How many children do you have?'

(13) *phǒm phûut phăasăa sɔ̌ɔŋ phăasăa*
I speak language two clsf:language
'I speak two languages'

In (11), a simple quantified nominal with the noun *tɛɛŋmoo* precedes the numeral-classifier constituent. Obligatorily the classifier, *lûuk*, follows the quantifier but also bears a lexically marked schematic relationship to the noun based on some common feature(s) that embrace the entire category (see also Langacker 1991: 165).

The noun, therefore semantically elaborates the more schematic classifier. This schematization of the classifier plays a necessary role in the grammaticality of the expression.

In (12) however, *lûuk* functions as a noun and not as a classifier, as it does in (11). These two discrete occurrences of *lûuk* are not arbitrary, nor are they homonymous, but polysemous (see section 2.2). Furthermore in (13) the noun *phăasăa* 'language' also functions as its own classifier, *phăasăa* 'clsf'. Here, a fully redundant relationship maintains between noun and classifier, as opposed to a schematic one. These constructs have been called 'repeater classifiers' and are well-attested in numeral classifier languages. Like the schematic classifiers, repeater constructions are not arbitrary. A close semantic relationship exists between a noun and its repeater classifier as a limiting case of schematicity. That is, the semantic and phonological distance of the speaker's categorization judgement between the prototype and the variant for *phăasăa* 'language' is equal to zero. This is also the primary evidence that the classifiers are grammaticalized nouns. Classical analyses such as Hundius and Kölver (1983: 167), therefore would admit the difference of *lûuk* in (11) and (12) and the full redundancy of *phăasăa* in (13) by crucially appealing to word order. The noun always precedes the classifier in the nominal. I contend, however, that a grammatical theory should account for both the grammar and the lexical semantics since they obviously interact to compose the grammaticality of the nominal and therefore are crucial to a full understanding

of the classifier phenomenon. Establishing the grammatical category of classifiers simply in terms of word order does not account for the polysemic relationships found both within a single phrase, as in (13), and in separate unrelated clauses, as in (11) and (12). An analysis that can account for the grammar and lexical semantics together in an elegant and intuitive fashion is preferred to one that cannot.

Examples (14) and (15) establish another important fact about classifiers. Classifiers have a semi-independent status as a unit reflected in anaphoric type phenomena (Downing 1986). This seems a likely occurrence if the classifier is indeed schematic to the noun.

(14) *khun mii lûuk kìi khon? sɔ̌ɔŋ khon*
you have child two clsf:human two clsf:human
'How many children do you have? (I have) two (children)'

(15) *thîi ráan nán khǎay kràbɔ̀ɔknáam yùu lǎay bay*
at store that sell bamboo-water-flask exist many clsf
'At that store (they) sell many bamboo water flasks.'
thúk bay sǔay
every clsf pretty
'Each one is pretty.'

A careful analysis should elucidate the semi-independent relationship exhibited by such anaphoric usages of the classifiers and nouns that elaborate them. In particular, in (14), the classifier *khon* of the response clause links backwards to the entire noun classifier construction of the eliciting question. In (15), both instances of the classifier *bay* link backwards to the direct object noun *kràbɔ̀ɔknáam* 'bamboo water flask'.

3.2. Cognitive Grammar and the problems presented by classifiers

A Cognitive Grammar account highlights the importance, among other things, of semantic correspondences between component structures in building composite structures. Furthermore, lexicon and grammar form a continuum of symbolic structures from which to build these composite structures. This being so, Cognitive Grammar seems to offer a good theoretical foundation to account for the categorization stemming from polysemy and the quantifying role of classifiers.

The numeral 'two' is shown on the lower left in Figure 3. The notational conventions that I use here are based on Langacker's discussion of various construals of quantifiers in English (1991: 85).

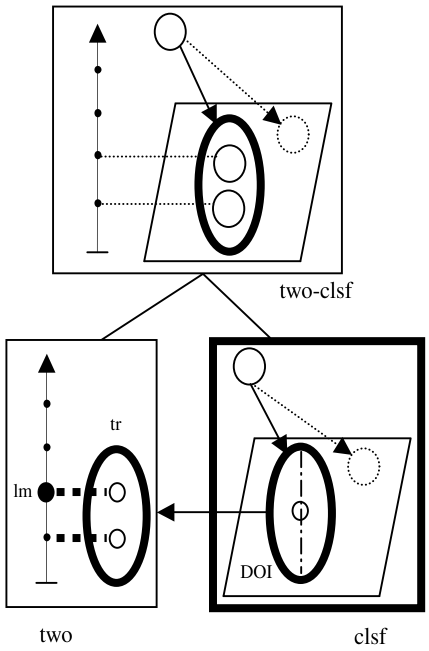


Figure 3. The numeral-classifier composite

The numeral links a bounded region, here the trajector, to some consecutive numerical scale, the landmark. This trajector/landmark construal represents a relational predicate because the relationship (interconnections) is profiled along with the scale and a bounded region.[9] It is its relationship to a discrete scale that makes this trajector a bounded region. The bounded region represents the size or magnitude of a single replicate mass in terms of a definitive and consecutive numerical value. The profiled bounded region is the relational figure (trajector) that moves, expands or contracts, in direct relationship to its ground or landmark.[10]

For all classifiers in numeral classifier languages generally and Thai specifically I posit the conceptualization found on the lower right in Figure 3. The classifier is an instantiating predication. It has a type specification that is schematic to the type of all nouns in the category based

on some feature or shape (abbreviated F in the figure). This is the very elaboration relationship between the schema and its noun in Figure 1 above. The type is anchored to a single instance of that type located within a domain of instantiation (DOI). The instantiation comprises an unbounded region and is profiled. It is unbounded because no limit exists within its set of constitutive entities. The minimal designation is one. Here the profile of the classifier is specified with one entity and a broken line to indicate both the minimal designation and its unboundedness respectively. This contrasts with other potential instances shown with the dotted lines. All dotted line occurrences are not instantiated, that is, they have no specific location within the domain of instantiation.[11] I propose that the classifier is inherently conceptualized for both functions, categorization and quantification, rather than just for categorization alone. The reasons for this will be established with the data on adjectives and demonstratives in section 3.4.

Every classifier shares this quantifying conception but differs in regard to the categorizing function, depending on feature or shape. This is a good hypothesis from the diachronic perspective since in Chinese the evolution of a classifier proceeded from a noun to a measure term and on to the classifier (section 2). The measure term stage of development might have given rise to the quantification conceptualization for classifiers while at a later stage, the lexical conceptualization developed via schemas and their category extensions.

The two component structures, 'two' and 'clsf', in Figure 3 share the same bounded region. These structures, therefore, correspond semantically, the classifier being schematic and the quantifier specific in regards to quantity. This correspondence relates a strong valency because being profiled, both corresponding sub-structures are salient. A general property of valence relations states that correspondences virtually always equate highly prominent substructures in the component predications (Langacker 1987: 361). The two component structures integrate to form the composite structure, 'two-clsf' on the top in Figure 3. The heavy line around the classifier box indicates that the classifier is the profile determinant. That is, the profile of the classifier and not the adjectival numeral is inherited at the composite level. The structure, 'two-clsf' is therefore nominal rather than adjectival. This characterizes the classifier as the head in this construction. This composite structure remains schematic in its type designation, F. The classifier is in fact the schema in correspondence to its noun, be it prototypical or variant (section 2.3 above). This schematic relationship is described in Figure 4.

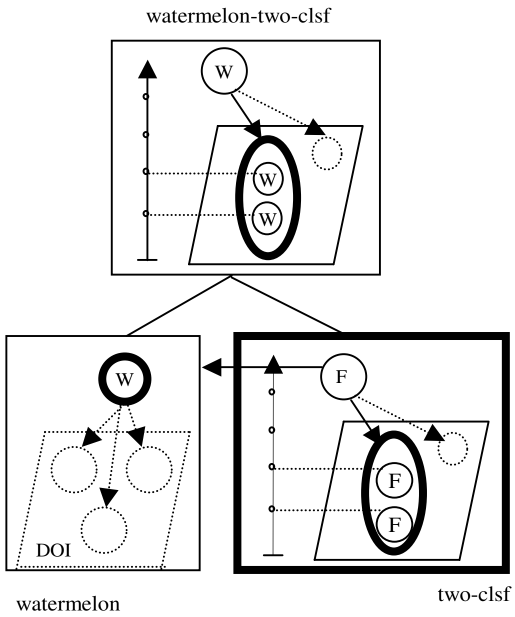


Figure 4. The nominal-classifier construction

Integration occurs between the type specification of the noun, here 'W' which stands for the full semantic detail of the noun 'watermelon' and the schematic specification of the numeral-classifier. The 'F' stands for a given 'feature' or conceptualization, such as 'fruit-like shape' in the case of *lûuk*. The schema elaborates the prototype or variant in the manner described in section 2.3.

The composite structure, 'watermelon-two-clsf' on top in Figure 4 inherits the profile of the classifier construction which profiles a region in some domain that is anchored to a location within that domain. It is fully specified for size and lexical content, here 'two-ness' and 'watermelon-ness' respectively.

3.3. Cognitive Grammar addresses measure terms

Measure terms parallel classifiers on a number of counts. How does a Cognitive Grammar account present the similarities and differences? Consider (16) and (17).

(16) *tɛɛŋmoo sɔ̆ɔŋ lûuk*
watermelon two clsf:round
'two watermelons'

(17) *kaafɛɛ sɔ̆ɔŋ thûay*
coffee two meas:cup
'two coffees'

In (17) *thûay* is a measure term and not a classifier in the categorizing sense of the word. A pure classifier categorizes a noun on the basis of some schematic feature or shape specification intrinsic to the noun. A measure term does not categorize the noun but quantifies it on the basis of some standard of measurement, such as a cup. A watermelon is a kind of round object but coffee is not a kind of cup (Hundius & Kölver 1983: 167; Langacker 1991: 167). Measure terms quantify mass nouns while classifiers quantify count nouns. Hundius and Kölver (1983: 168), therefore make an appropriate generalization and call the quantifying function of these two types of classifiers *numeratives*. They restrict the term classifier to stand for the subset of numeratives that 'constitute a network of lexically pre-established relationships with sets of count nouns'. A grammatical theory should be able to account for the generalization of quantification (both count noun and mass noun) as well as the specialization of categorization, which is based on a count/mass distinction.

The numeral-classifier demonstrated in the composite structure in Figure 3 is redrawn on the left in Figure 5. The type specification has been enriched to characterize its internal structure, implied in Figure 3. The type designation is actually a type of a replicate mass. This mass has a specific feature characterization (F), which is instantiated and quantified by the classifier and quantifier respectively.

The 'two-clsf' composite structure thus profiles a single instance, the magnitude of which in this case is two entities (two-'schematic things'). The numeral-measure construction, 'two-cups' on the right in Figure 5 is comparable. The type designation is a type of non-replicate mass but is characterized by a standard measure (M) in contrast to a feature or shape (F). Similar to a classifier, the measure term instantiates a single instance of a type, here a mass noun instead of a replicate mass noun. The mass noun is comprised of undifferentiated entities of its substance.[12] When the measure term integrates with the quantifier the profiled instance is quantified with respect to a standard measure in the type designation. Just as certain count nouns are sanctioned by a classifier marked with a certain feature, so the mass noun is sanctioned by a measure term marked

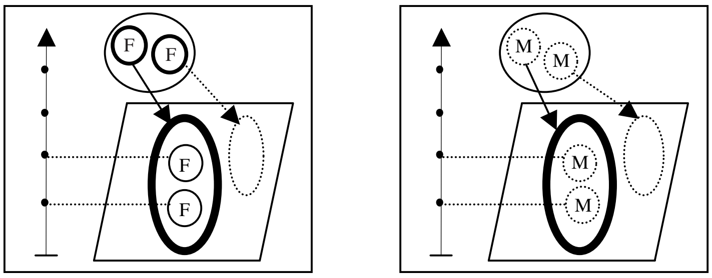


Figure 5. Quantified classifiers and measure terms

with an appropriate measurer (container) to the substance (cups of coffee, glasses of water, etc).[13]

A Cognitive Grammar analysis thus shows that classifiers and measure terms are similar in internal conceptual structure by designating an instance of a type allowing quantification to take place. But they differ in terms of the kind of external conceptual structure they impose on a category. A count noun elaborates a schema based on a kind/type category, i. e., 'W, 'watermelon', is a kind of F, 'fruit-like-thing' (see section 2.3). A mass noun, on the other hand, does not elaborate but associates to a schema according to what kind of measure can be used to measure it. Langacker has suggested that this could be interpreted as "referring to a schematically characterized mass whose volume is such that it would just fit in such a container" (1991: 167). The mass noun relationship would then be 'coffee is a kind of M' where M is *mass whose volume would just fit into a given container*. The container in this case is 'cup' and the magnitude of the volume 'two cups'. Maintaining a schematic relationship to the noun in this fashion accounts for numeral-measure constructions functioning pronominally as in (18).

(18)	*khun*	*aw*	*kaafɛɛ*	*kìi*	*thûay?*	*sɔ̌ɔŋ*	*thûay*
	you	want	coffee	how-many	cup	two	cup

'How many cups of coffee do you want? Two cups.'

This is analogous to the anaphoric function found in the numeral-classifier construction in (14) and (15) discussed in section 3.2. Both numeral-classifier and numeral-measure constructs act anaphorically. This analysis explicitly states why this is the case. In both constructs a noun sustains a schematic relationship to its instantiating structure.

3.4. Cognitive Grammar addresses classifiers with adjectives and demonstratives

This analysis, employing the conceptualization of the classifier in Figure 3, becomes more important when giving an adequate account of adjectival usages. Consider the data in (19).

(19) a. *chăn hěn bɔɔn sĭiluaŋ*
I see ball yellow
'I see yellow balls' ['I see yellow ball-ness']

b. *chăn hěn bɔɔn lûuk sĭiluaŋ*
I see ball clsf yellow
'I see yellow balls'

(20) a. *chăn hěn bɔɔn nîi*
I see ball this
'I see this/these ball(s)'

b. *chăn hěn bɔɔn lûuk nîi*
I see ball clsf this
'I see this [definite] ball'

Examples (19) and (20) illustrate a continuum of specificity in regard to the reference and quantity of the noun. The most general case, (19 a), refers to a very vague idea of yellow ball-ness. Regarding the two parameters of reference and quantity, it is vague. On the other hand, (19 b), while vague regarding reference, is more specific in quantity. Preferably it designates one object but is not restricted to marking a single object. In contrast, (20 a) employs a grounding predication, *nîi* 'this', specifying definiteness. This refers to a ball specific to the speech act participants. In terms of reference it is specific while in quantity it remains vague. (20 b) is most specific containing a definite reference, *nîi* 'this' and quantity, *lûuk* 'one instance and no more'.

A continuum such as this is nicely accommodated within the present account of numeral-classifiers as in Figure 6 below.

Figure 6 a diagrams the adjectival examples in (19). This reveals the optionality of the numeral-classifier in respect to a non-quantitative attribute, here 'yellow'. 'Yellow', as a non-instantiating structure, can integrate directly with the noun, as in (19 a) with a more indefinite reading, or with a classifier (19 b) with a more definite meaning. It is the occur-

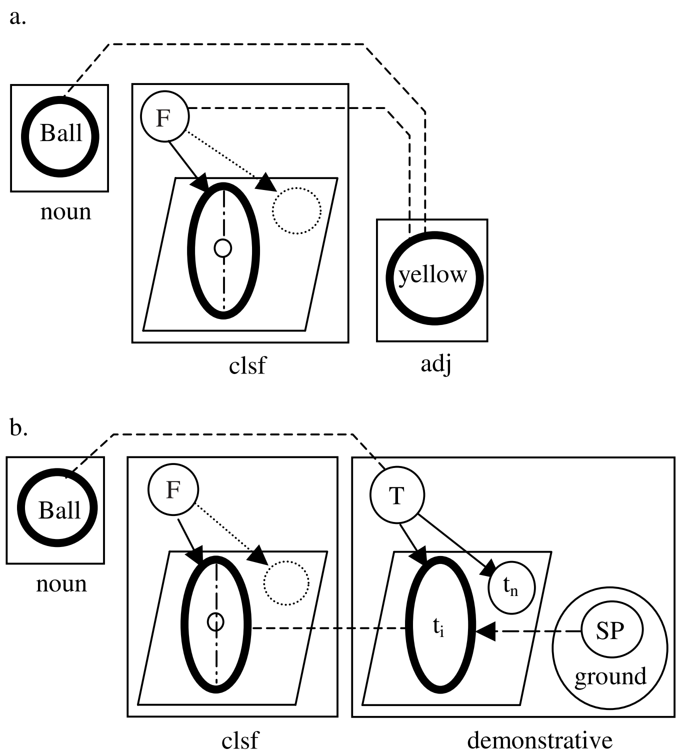


Figure 6. Classifier with adjective and demonstrative

rence of the classifier in (19 b) that suggests that the classifier indeed is an instantiating predication. A quantity of at least one object is in view even though there is no overt numeral specifying the quantity of one. I claim that this construction receives this specification of one as a default via the classifier instead of via the numeral (see also Hundius and Kölver 1983: 174).[14] The example in (19 a) is diagramed in Figure 6 a with the type description between a noun and adjective in mutual correspondence. This correspondence is represented with dashed lines in the figure.

When the noun and adjective are integrated as in (19 a), the descriptive detail of the noun is enriched but reference and quantity are vague because these are contributions of a classifier and demonstrative which are absent in (19 a). When the noun and adjective are integrated with a classifier as in example (19 b), an instantiation within the domain of color results. This instantiation is the contribution of the classifier. In (19 b) the instantiation remains ambiguous regarding quantity because there is

no overt numeral in the construction. When a numeral is absent, more often this suggests one entity. The result is an instance of at least one entity fully specified for yellow.

The grounding predications in (20) are represented in Figure 6 b. A demonstrative such as *nîi* 'this/these' is a grounding predication. A mental path from the speech act participants and a specific nominal has been established in the conceptualization designated by the demonstrative in the right-hand box of Figure 6 b. In the representation of the demonstrative construction, adapted from Langacker (1991: 92), the speech act participants (SP) represent the ground of the speech event. Its type designates more than one instance within its domain of instantiation. The speech act participants make mental contact with a specific instance. Following Langacker, the mental contact is indicated with a long dashed arrow instead of a solid arrow. This specific instance is selected against other potential instances and therefore is profiled. The semantic correspondence between the type designations of the demonstrative and the noun is highly significant. This allows an immediate compositional path between a noun and a demonstrative to compose grounded nominals as found in sentences like (20 a). This is shown in Figure 6 b with the noun in correspondence with the type designation of the demonstrative. The classifier is then circumvented producing the example in (20 a). Here a specific ball known to the speaker and hearer is being selected for comment. However, since the demonstrative is schematic in quantity but specific in reference, sentences such as (20 a) are likewise both quantitatively imprecise while being referentially specific. Therefore, when the speaker's communicative goal is reference to a specific quantity, it is no wonder that a numeral-classifier is employed as in (20 b), reflected in Figure 6 b with the classifier. Here a single specific ball is targeted in the minds of the speech act participants. The classifier (with its default conception of one object) together with the grounding predication designate a single instance whose entities consist of at least one.

A full nominal can be expressed, as illustrated in (21). These are nominals because they each contain at least one classifier.

(21) a. *bɔɔn lûuk sǐiliaŋ lûuk nîi*
ball clsf yellow clsf this
'this yellow ball'

b. *bɔɔn lûuk sǐiliaŋ lûuk yày lûuk nîi*
ball clsf yellow clsf big clsf this
'this big yellow ball'

In (21), a classifier is used with each lexical item in the construction, domain notwithstanding. The feature characterization for each classifier remains constant (*lûuk*), therefore it is the same referent. The domains of color and quantity are invoked in (21 a), whereas domains of color, size and quantity are invoked for (21 b). Under the Cognitive Grammar analysis these examples are treated the same way without the need to posit any further descriptive device.

4. Conclusion: Toward a unified account of numeral classifiers

The Cognitive Grammar analysis proposed here reveals several important characteristics of numeral classifiers for which any theory should give account. Firstly, at the lexical level, the classifier serves as a schema in an elaborating relationship to both prototype and variant within a complex radial category. In this way, both the prototype and any variant of extension receives full sanction via the classifier.

Secondly, the classifier and noun bear a semantically marked schematic relationship. The noun must be within the subset of nouns to which a given classifier sanctions by its marked features. In other words, not just any classifier can function in a particular classifier slot. There must exist a feature-based schematic relationship such that the noun elaborates its classifier. This is an important point because it maintains at the lexical level (section 2 and 3). An analysis that is based on the sole criterion of word order for distinguishing noun and classifier cannot explain this fact.

Thirdly, the Cognitive Grammar account does not rule out the possibility of an instance of a noun functioning as a classifier for another set of nouns. The capacity for Cognitive Grammar, therefore, to specify semantic content at any level of specificity accounts for potential polysemy such as that found in examples (11) and (12). Cognitive Grammar distinguishes the polysemy based on the conceptualization each participating predication invokes. The separate accounts of *lûuk* will have equal access to the schematic network that represents the overall meaning of *lûuk* in developing their respective conceptualizations. The degree to which each occurrence of *lûuk* accesses the schematic network, also determines the degree to which polysemy is recognized for a given speaker. An account based on word order misses this generalization because it lacks inherent reference to lexical semantic content and can only recognize the two usages of *lûuk* simply as being two separate words.

Fourthly, as a limiting case of schematicity, a noun can be categorized by itself as in the repeater construction in (13). These two occurrences within the same nominal are polysemous.

Fifthly, the numeral-classifier is the nominal head. This is supported by its behavior as a semi-independent structure from the noun. The numeral-classifier behaves pronominally in answer to questions or as an anaphoric reference to previously established nouns. Also, nominal heads are typically closely associated with number. Langacker has explained this in terms of plurality for English (1991: 145–146, 165). For a language such as Thai that does not distinguish plurality in any noun marking, the primary location for registering quantity resides with the classifier within the numeral-classifier composite structure. This is supported by the strong distribution patterns across languages where the numeral-classifier represents an indivisible constituent against other constituents within the nominal.

Sixthly, Cognitive Grammar accounts naturally for both classifier and measure terms as similar constructs by revealing that while they both sanction the quantification of nouns, they accomplish this via different categorizing strategies intrinsic to count and mass noun structure.

Finally, the classifier is an instantiating predication. As such, it has an affinity with numerals for making close-knit numeral-classifier units where quantification is required. It further acts to provide a default specification of a singular object where no overt numerals occur in the construction.

The classifier constructions in numeral classifier languages exemplify a grammatical function in quantifying nouns and a lexical function in categorizing objects. Because Cognitive Grammar views lexicon and grammar as a continuum of symbolic units, the theoretical constructs employed to account for lexical categorization also account for grammatical quantification. In this way, the descriptive labor demanded by classifier phenomena is nicely accomplished with a rather economical set of conceptual constructs.

Notes

1. I am grateful to Gary Palmer, Ken Gregerson and Gene Casad for valuable discussion and comments leading to revisions of this paper.
2. The two conceptual semantic approaches of Lakoff and Langacker have been nicely summarized and integrated by Palmer (1996: 91–98).

3. Croft (1994: 152 ff.) discusses numeral classifiers as organized in an implicational hierarchy, i. e., if a given system distinguishes objects by rigidity they also employ shape.
4. This notion of broadness might be reflected in the Thai idiom *bay nâa ìimeem* [clsf face full], which means 'a beaming face'. Here the classifier *bay* might be expressing the extended idea of 'broad' to reinforce beaming or full face. See Ukosakul (1999: 194).
5. The examples in (7) can optionally take *lûuk* as the first member in a compound similar to *bay* in (1) above.
6. This is not to say that they recognize every classified noun. As the classifier extends to other domains and the relationship becomes more metaphorical, the polysemy then might be lost on the conscious mind of the speaker, but a semantic motivation remains along the lines of Lakoff (1987).
7. An exception is found in Langacker (1991: 164–167), where he briefly posits a potential Cognitive Grammar account of the numeral classifier phenomenon found in Mandarin Chinese. This indeed was the discussion that launched my own research interest in Thai classifiers. The account in this paper is more detailed but follows very much on the foundation established by Langacker.
8. The term *numeral* is used in Jones (1970: 3). However, the syntactic function described also pertains to other non-numeric quantifiers such as *some* and *several.* As a result the more general term found in the literature is *quantifier*.
9. I propose that it is this simple adjectival construal that combines with a Thai classifier, while Langacker analyzes Chinese with a nominal construal of the quantifier (1991: 85 and 166).
10. See Langacker (1991: 81–89) for a more detailed account of quantifiers.
11. The uninstantiated instances (dotted lines) might very well be part of the conceptual base, especially in a grounded predication (see section 3.4).
12. For a detailed discussion on the differences between a replicate mass noun and a non-replicate mass noun see Langacker (1991: 78–81).
13. Certain count nouns (e. g. fruit) can be quantified by measure terms (e. g. kilos). In this case the replicate mass noun loses its individuation and becomes construed as just a mass. This mass in turn becomes quantified via a standard of measurement.
14. This is a significant point in addition to Langacker's conceptualization of a classifier in his figure 4.5 (1991: 166). His conceptualization cannot account for examples like (19 b), where no overt numeral exists in the construction but where a definite quantity is understood specifically because of the presence of the classifier, *lûuk*.

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A cognitive account of the causative/inchoative alternation in Thai

Kingkarn Thepkanjana

1. Introduction

The causative/inchoative alternation is a type of transitivity alternation which is frequently found in the world's languages, including those as diverse as Thai and English. The term "transitivity alternation" refers to a change in the expression of verb arguments, which may be accompanied by changes of meaning. In the causative/inchoative alternation, the form "NP V NP" alternates with "NP V" with the condition that the object of the transitive verb is coreferential with the subject of the intransitive verb. Some examples of the causative/inchoative alternation in Thai include *pə̀ət (pratuu)/(pratuu) pə̀ət*, literally, 'open (door)/(door) open, be open', *khôon (tônmáy)/(tônmáy) khôon*, literally, 'fell (tree)/(tree) fell down, be down', and *lóm (kâw?îi)/(kâw?îi) lóm*, literally, 'topple (chair)/(chair) fall over, be down'.

In the verb pairs above, the transitive forms may be called causative verbs since they incorporate the notions of cause and effect. On the other hand, the intransitive counterparts designate either changes that happen to the subject arguments or the resulting states of the subject arguments. Hence, they are called inchoative and stative verbs, respectively. The intransitive verbs are thus ambiguous between the inchoative and the stative readings. However, the context of situation may help disambiguate this kind of verb. In this paper, the term "causative/inchoative alternation" is used to refer to the causative/inchoative/stative alternation.

The causative/inchoative alternation is the type of transitivity alternation that has received the most attention from linguists (cf. Levin 1993: 27). Most research work on this topic aims at accounting for the relationships between the alternating verbs and at identifying the semantic classes of verbs that participate in the causative/inchoative alternation. This paper takes a different approach by providing a cognitive account of the causative/inchoative alternation in Thai by carrying out a corpus-based case study of a Thai verb which notably participates in this alternation, namely, *pìt* 'close'. This paper also argues against Levin and Rappaport's

(1994, 1995) analysis of this phenomenon, which is the most detailed and the most significant work on this topic in recent years.

This paper is divided into five sections. The primary research on the causative/inchoative alternation will be reviewed in section 2. In section 3, the findings from a corpus-based study of the Thai verb mentioned above will be presented. I will provide a cognitive account of the causative/inchoative alternation in section 4 and will present my conclusions from the analysis in section 5.

2. Previous work on the causative/inchoative alternation

In the past fifteen years, the relationships between causative and inchoative verb forms have received a great deal of attention from linguists especially those who take an interest in the semantics of verbs. In this section, I will review some selected research publications dealing with this alternation which are regarded as significant, namely, Nedyalkov (1969), Haspelmath (1993), Levin and Rappaport (1994, 1995), Montemagni and Pirrelli (1995), and Montemagni, Pirrelli and Ruimy (1995). Although they do not all deal exclusively with the causative/inchoative alternation, they all touch on it and provide different theoretical perspectives to this phenomenon.

2.1. The typological approach

Nedjalkov (1969) and Haspelmath (1993) take a typological approach to the causative/inchoative alternation by examining two aspects of this causative/inchoative alternation, namely, preferences of languages for different formal types in expressing this alternation, and universal semantic restrictions on the verbs which participate in it. Only the second aspect of their studies will be reviewed here for reasons of space. These two works find that there is a universal continuum of lexical causativizability and anticausativizability, which corresponds to the ease and difficulty, respectively, of conceiving of a given kind of event as being directly causable and anticausable from outside. At one end of this continuum is located the kind of event which is typically spontaneous and quite unlikely to be directly causable from an external agent, such as *die, blink, rise, laugh*. This kind of event typically occurs as an inchoative verb, which resists causativizability. At the other end of this continuum, we will find

the kind of event that is typically instigated by an external agent, such as *cut, feed, wash*. This kind of event normally occurs as a transitive causative verb, which hardly has an inchoative alternant. Between the two extremes, we will find the types of event that are more or less instigated by an external agent, or more or less spontaneous, such as *close, break, melt, boil, burn.* These types of event thus resist causativizability and anticausativizability to different degrees. In short, these two works find that the semantic properties of verbs impose a constraint on whether the verbs can participate in the causative/inchoative alternation or not.

2.2. The lexical approach

A lexically oriented approach to transitivity alternations, including the causative/inchoative one, has been developed by a number of linguists who worked in the 1980's in the now defunct Lexicon Project, Center of Cognitive Science, MIT. The work on transitivity alternations carried out by these linguists formed a part of a larger study aiming at accounting for a native speaker's lexical competence and for lexical organization in the language. According to the lexical approach, transitivity alternations are effected by means of an operation on the lexical semantic representation of the basic verb. Two works which provide the most in-depth analysis on the causative/inchoative alternation from a lexically oriented approach are Levin and Rappaport (1994 and 1995).

According to Levin and Rappaport, alternating intransitive verbs, which refer to the intransitive verbs which have transitive alternants, are derived from dyadic causative verbs. In other words, causative variants are the basic forms whereas the intransitive ones are derived. They argue that causative verbs detransitivize only under specific circumstances and thus become intransitive verbs. Alternating intransitive verbs are also called by Levin and Rappaport "externally caused verbs". Levin and Rappaport postulate two kinds of causation, namely, "internal causation" and "external causation". An internal cause refers to some property inherent in the argument of the verb which is responsible for bringing about the event, such as the will or volition of the agent. An external cause refers to something in the world which has an immediate control over bringing about the event. An external cause includes an agent, an instrument, a natural force, or a circumstance. Some externally caused verbs can be used intransitively without the expression of an external cause in some circumstances. Even though no external cause is specified

in a sentence, our real-world knowledge tells us that the event indicated by the intransitive verb could not have happened without an external cause.

Levin and Rappaport's work is based on the assumption that the syntactic behavior of a verb, including its transitivity alternations, is largely determined by its meaning. Therefore, they aim at identifying semantic classes of verbs which participate in the causative/inchoative alternation. Most of these verbs are verbs of change of state. Levin (1993) gives a more specific list of verb classes in English which participate in the causative/inchoative alternation and another list of verb classes which does not (Levin 1993: 28−30). It is also stated in Levin and Rappaport's work that the set of objects which occurs with a transitive variant is larger than the set of subjects which occur with an identical intransitive variant. The asymmetry in the selectional restrictions provides a guide to which variant is basic. Since the variant with the looser selectional restrictions is claimed to be basic, the transitive variant is the basic one according to Levin and Rappaport. Moreover, it is noted that the semantics of the arguments of verbs bears on the possibility for the verbs to participate in the alternation. In short, Levin and Rappaport's account of the causative/inchoative alternation postulates a lexical process of detransitivization which maps the lexical semantic representations of transitive causative verbs onto those of intransitive ones.

2.3. The corpus-based approach

A corpus-based approach to the study of the causative/inchoative alternation has been developed at the Istituto di Linguistica Computazionale (ILC-CNR) at Pisa, Italy. The term "corpus-based" refers to the approach of linguistic analysis which draws its generalizations primarily from a data base stored in an electronic form. Two pieces of work on the causative/inchoative alternation in Italian adopting the corpus-based approach will be reviewed below, namely, Montemagni and Pirrelli (1995), and Montemagni, Pirrelli and Ruimy (1995).

According to these two corpus-based studies, the conditions under which a certain verb is expected to undergo the alternation are not constituted by the semantic classes of verbs alone. Fine-grained selectional restrictions or the semantics of the arguments which the verbs are combined with also play a crucial role in stating the conditions of the causative/inchoative alternation. In other words, the causative/inchoative alterna-

tion does not apply "across-the-board" over the set of possible arguments occurring with a verb. The alternation is sensitive to the semantics of the arguments of the verb. The examples below illustrate this point.

(1) a. *Mary rang the bell.* b. *The bell rang.*

(2) a. **Mary rang the telephone.* b. *The telephone rang.*

It is also revealed by these studies that nonalternating arguments are often related to alternating arguments through figurative meaning extensions, which can be either metaphoric or metonymic. Figurative uses are often compatible with one alternant only.

In short, the conditions on the causative/inchoative alternation in previous studies are stated in terms of semantic classes of verbs which are too coarse. Such conditions must make reference to verb meanings as well as the fine-grained semantics of the arguments of the verbs. Moreover, the figurative use of language must be taken into consideration in accounting for the causative/inchoative alternation.

3. Findings from a corpus

In this section, I will present findings from an analysis of a corpus of the Thai verb *pìt* 'close'. A large number of corpus citations of this verb is drawn from a corpus of modern written Thai belonging to the Software and Language Engineering Laboratory, the National Electronics and Computer Technology Center (NECTEC), Thailand. The corpus contains citations of this verb occurring transitively and intransitively with different arguments. The verb *pìt* 'close' is chosen for investigation because it expresses a situation which occurs cross-linguistically as a typical situation in the causative/inchoative alternation. According to Haspelmath (1993), the verb glossed as 'close' in any language is likely to be caused externally but still usually occurs spontaneously. Since this verb meaning corresponds to a typical situation in the causative/inchoative alternation cross-linguistically, the Thai verb *pìt* expressing this meaning is chosen for investigation in this study.

An examination of the corpus citations of the Thai verb *pìt* 'close', finds that this verb, which occurs in combination with different arguments, conveys a diversity of meanings in both its transitive and intransitive uses. Moreover, it is not always the case that the verbs which occur

transitively with certain arguments have an intransitive counterpart. The same also holds true for the verb occurring intransitively in the corpus. This means *pìt* 'close' behaves differentially in identical syntactic frames when it is combined with different arguments. I will present the various meanings of the verb *pìt* 'close' in transitive and intransitive uses in section 3.1. I will illustrate each meaning of the verb by only one example due to a limited space.

It should be noted that the intransitive variants of this verb are ambiguous between inchoative and stative readings. This is why the translations of intransitive examples given below alternate between the inchoative and stative meanings. In most cases, the context and knowledge of the world are sufficient for disambiguating the potentially conflicting readings.

3.1. Meanings of the verb *pìt* 'close' in each syntactic use

As mentioned above, the Thai verb *pìt* 'close' occurring either causatively, inchoatively or statively has a diversity of meanings, which is attributed to the arguments that the verb is combined with. In this section, I will make a preliminary analysis of the meanings of this verb in the corpus based on my intuition and will then account for the relations between these meanings in section 3.1.2.

3.1.1. Meanings of pìt *'close'*

The number of the corpus citations containing the verb *pìt* used transitively is much higher than when it is used intransitively. The former total 109 citations whereas the latter totals 20. It follows naturally that the meanings of the transitive *pìt* are more varied than those of the intransitive one. It is noted that the intransitive verb *pìt* can indicate either the inchoative or the stative reading depending on the context.

The meanings of the intransitive *pìt* are as follows.

1. For an entity to change from being open to not being open, i. e. to become shut

(3) *rimfĭipàak dèk pìt nɛ̂ɛn*
lips child close tight
'The child's lips were tightly closed.'

2. For a business establishment, office, institute to cease to operate either temporarily or permanently

(4) *ráan kǔaytǐaw câw arɔ̀y tɔ̂ŋ pìt pay phrɔ́ʔ*
shop noodle classifier delicious must close go because
thon sǎnphaakorn mây wǎy
tolerate the Revenue Department not can
'The delicious noodle shop had to close down because it could not tolerate the Revenue department.'

3. For an association to become restricted to only a group of people, rather than be open to the public

(5) *pràtuu khɔ́ɔŋ phák châatthai pìt lɛ́ɛw*
door of political party Chartthai close already
'The door of the Chartthai political party has already closed,' or 'The Chartthai political party does not welcome newcomers anymore.'

4. For the stock market to reach a certain point at the end of a workday

(6) *dàtchanee làksàp wanníi pìt thîi ráʔdàp 5,076.85 cùt*
index stock today close at level 5,076.85 points
'The stock index today reached 5,076.85 points.'

The meanings of *pìt* 'close' which occurs in transitive use are as follows.

1. For X to move so that an opening is obstructed, to shut

(7) *phaanrooŋ pìt pràtuu rooŋrian*
janitor close door, gate school
'The janitor closed the gate of the school.'

2. For X to cover something

(8) *khon booraan pìt râaŋkaay dûay baymáy*
person ancient close body with leaf
'The primitive people covered their bodies with leaves.'

3. For X to stick, glue, affix something (on something else)

(9) *khǎw chɔ̂ɔp pìt thɔɔŋ phráʔ*
he like close gold buddha image
'He liked applying gold leaves on buddha images.'

4. For X to put business activities or operation to a stop either temporarily or permanently

(10) *bɔɔrisàt khɔ̌ɔŋ phǒm pìt kìtca?kaan lɛ́ɛw*
company of I close operation already
'My company has already closed down.'

5. For X to turn off an electric or mechanical device

(11) *yàa lɨɨm pìt phátlom ná?*
don't forget close fan final particle
'Don't forget to turn off the fan.'

6. For X to close an account, a case; to terminate a project

(12) *borisàt pìt banchii lɛ́ɛw*
company close account already
'The company has already closed the account.'

7. For X to discontinue the use or functioning of a place or establishment

(13) *rátthabaan prakàat pìt thâarɨ̂i chûakhraaw*
government announce close seaport temporary
'The government announced the temporary closure of the seaport.'

8. For X to block passage or access to a place

(14) *rátthabaan pràkàat pìt nâanfáa phɨ̂a khwaamplɔ̀ɔtphay*
government announce close airspace for security
'The government announced the closure of the airspace for the sake of security.'

9. For X to hide or conceal something, i. e. feelings or information

(15) *rátthabaan phayaayaam pìt khàaw rɨ̂aŋ lót khâa ŋən*
government try close news about decrease value money
'The government tried to conceal the news about the devaluation of the currency.'

10. For X to conceal (something) from somebody

(16) *phûutɔ̂ŋsǒŋsǎy phayaayaam pìt tamrùat*
suspect try close police
'The suspect tried to hide facts from the police.'

11. For X to prevent an opportunity from occurring

(17) *yàa pìt ?ookàat chǎn*
don't close opportunity I
'Don't close an opportunity for me.'

12. For X to end an activity

(18) *pràthêet isarael tɔ̂ŋkaan pìt kaanceeracaa dooyrew*
country Israel want close negotiation quickly
'Israel wanted to end the negotiation quickly.'

3.1.2. Relations between meanings

In accounting for the relations between the meanings of *pìt* 'close' listed above, I will draw on the insights provided by Cruse (1986), which is considered a foundation of lexical semantics, and on those regarding the network model set forth by Langacker (1987) in Cognitive Grammar. According to Cruse, the meaning of a word seems to be infinitely variable and is dependent on the context in which the word appears even though the syntactic context remains the same. However, discrete units of meaning can be identified which are stable in some ways across contexts. These discrete units of meanings are referred to as "meaning" by Cruse (1986). The meanings of each of the two verbs in each syntactic use listed above are identified, based on my intuition, and are considered as stable across certain contexts. Some of them may be distinguishable and unitable simultaneously whereas some may be one way more than the other.

Langacker (1987) proposes the network model, which synthesizes the prototype theory and categorization based on schemas. In the prototype model, a category is defined with reference to a prototype. Entities that conform to this prototype are considered "central" members of the category. Non-conforming members can be assimilated to the category as "peripheral" members if they are judged by the categorizer as being similar to the prototype in certain respects. Therefore, category membership is a matter of degree, reflecting the distance of a member from the proto-

type. Membership in a category involves some degree of subjectiveness. Whether an entity qualifies as a member of a certain category depends on the judgement of the categorizer, and on his tolerance in accepting members that diverge from the prototype. In the prototype-based network model, members of a category are analyzed as nodes in a network, which are linked to one another by various sorts of categorizing relationships, namely, extensions from a prototype, elaboration or instantiation, and perception of mutual similarity. The kind of categorizing relationship which is relevant to the issue being analyzed is extension from a prototype. The notion of extension implies some conflict in specifications between the basic and extended values. For example, if [B] is extended from [A], which is symbolized as [A] ⇢ [B], it means that [B] is incompatible with [A] in some respect, but is nevertheless categorized as [A]. Members of a category are located at different distances from the prototype. The term "distance" here means the amount of modification of a prototypical member which is required to arrive at a divergent member. In addition, the nodes and categorizing relationships comprising the network vary in their cognitive salience and degree of entrenchment.

The meanings of the verb *pìt* 'close' listed above can now be described in Cruse's and Langacker's terms. It is obvious that there are two complex groupings of meanings each of which constitutes a network model. Each meaning listed above is intuitively discrete enough and stable enough across contexts to qualify as a distinct unit of meaning. The first meanings of the verb in the two syntactic uses are the most basic of all the meanings as they are the most semantically neutral, the most cognitively salient, and the first meanings which come to mind. Each first meaning in each semantic grouping thus constitutes the prototypical member of the category. The other meanings in each grouping are arguably extended from the prototypical member in some way. I will analyze the relations among the meanings of the verb in each grouping as below.

There are four meanings of the intransitive use of *pìt* 'close'. The other three meanings of the intransitive *pìt* are extended from the prototypical meaning in different ways. The second meaning "to cease to operate either temporarily or permanently", which applies to an office or a business establishment, usually results in the establishment becoming shut. The third meaning "to be restricted to only a group of people, not open to the public", which applies to a political party in example (5), can be regarded as a consequence of becoming shut. The fourth meaning, which applies to the stock index, is "to reach a certain point at the end of a working day". This meaning is a result of the daily closing of a stock market. It is thus obvious that the meaning of the intransitive verb *pìt*

depends on the meaning of its subject argument. The subject argument "promotes", in Cruse's terms, certain semantic traits of the verb *pìt* to a canonical status, whereas it "demotes" some others to an anomalous status.

The transitive *pìt* has a more complex grouping of meanings than the intransitive counterpart. The twelve meanings of the transitive *pìt* can be classified into five subclasses, which are extended in different ways from the prototypical meaning of the verb. These five subclasses of meanings revolve around five semantic elements extended from the prototypical meaning. The first three semantic extensions are different consequences of a physical action of shutting something. When one physically shuts something, one may in consequence (a) cover something else underneath, (b) lose sight of something underneath or behind after an opening becomes obstructed, or (c) block passage or access to a place. These consequences can be regarded as "semantic traits" in Cruse's terms. Some semantic trait of the verb is promoted whereas some others are demoted depending on the type of entity whose opening is obstructed. Meaning (2) "to cover something" and meaning (3) "to stick, glue, affix something (on something else)" draw on consequence (a) of the prototypical meaning whereas meaning (8) "to block passage or access to a place" and meaning (11) "to prevent an opportunity from occurring" draw on consequence (c). Meaning (9) "to hide or conceal something" and meaning (10) "to conceal (something) from somebody", which share the semantic element of hiding or concealing something, extend from consequence (b), namely, to lose sight of something after closing, or, to be unable to see something due to its being hidden from sight. On the other hand, the remaining two subclasses of meanings are based on another kind of semantic extension from the prototypical meaning, namely, implicational inferences or "implicatures". Meaning (4) "to put business activities or operation to a stop either temporarily or permanently", meaning (7) "to discontinue the use or functioning of a place or establishment", and meaning (12) "to end an activity", are based on the implicature that an establishment tends to stop functioning or to cease to operate after it is closed. Meaning (7) is based on the implicature that one tends to quit using a place or an establishment after it becomes closed. Meaning (5) "to turn off an electric or mechanical device" and meaning (6) "to close an account, a case; to terminate a project" in turn extend from the implicature of quitting using a place; they involve the meaning of discontinuing the use of a device in the case of meaning (5) and of discontinuing tending to the project, a legal case, or an account in the case of meaning (6). The type of implicature that is relevant here is called "conventional"

implicature, and is derived from lexical meanings. Conventional implicatures are unpredictable and arbitrary in the sense that they must be learned as part of the polysemies of the word, and are not cancelable. Conventional implicatures are contrasted with conversational implicatures, which are not computable from lexical meanings alone, but of lexical meanings with implicatures arising from speech act maxims (Hopper and Traugott 1993: 72–73).

In short, three out of five subclasses of extended meanings are actually three different consequences of the physical action of shutting, which is the prototypical meaning. Two of these three subclasses of meanings directly draw on the two consequences of the prototypical meaning whereas one subclass of meaning is in turn a semantic extension from one of the two consequences. The remaining two subclasses of meaning are based on certain implicatures of the prototypical meaning. The correspondence between the extended meanings of *pìt* 'close' and the semantic elements are shown below.

Table 1. Correspondences between the meanings of the intransitive *pìt* and the semantic elements

Extended meanings of the intransitive *pìt*	Semantic elements
2. For an office or an institute to cease to operate either temporarily or permanently	– a cause of the establishment becoming physically shut
3. For an association to be restricted to only a group of people, rather be open to the public	– a consequence of becoming physically shut
4. For the stock market to reach a certain point	– a result of the daily closing of a stock market

To sum up, it is apparent that the prototypical meaning of this verb has quite a complex conceptual structure constituted by various events. These events are referred to as semantic traits in Cruse's terms. In Langacker's terms, the meaning of this verb can be modelled as a network of related meanings. The subject arguments in the case of the intransitive verb forms and the direct object arguments in the case of the transitive verb forms, promote some semantic traits to a canonical status. Note that this is a reflection of a fundamental and pervasive autonomous-dependent distinction between basic semantic elements, i. e., nominals are semantically autonomous whereas verbs are semantically dependent (Langacker 1990: 122; 1999: 37, 382, fn. 43). This gives rise to different semantic vari-

Table 2. Correspondences between the meanings of the transitive *pìt* and the semantic elements

Extended meanings of the transitive *pìt*	Semantic elements
Subclass A 2. For X to cover something 3. For X to stick, glue, affix something (on something else)	– a consequence of shutting something: to cover something underneath
Subclass B 8. For X to block passage or access to a place 11. For X to prevent (an opportunity) from occurring	– a consequence of shutting something: to block passage to a place
Subclass C 9. For X to hide or conceal something 10. For X to conceal (something) from somebody	– a consequence of shutting something: to lose sight of something underneath or behind
Subclass D 4. For X to put business activities or operation to a stop either temporarily or permanently 7. For X to discontinue the use or functioning of a place or establishment 12. For X to end an activity	– an implicature of shutting the door of a place: an establishment tends to cease to operate or function
Subclass E 5. For X to turn off an electric or mechanical device 6. For X to close an account, a case; to terminate a project	– an implicature of quitting using a place: to discontinue the use of devices located in that place, and to discontinue tending to some kind of document used in that place

ants which extend from the prototypical meanings of the verb in the two syntactic uses. It can be concluded at this point that the meaning of a verb does not exist in isolation from its arguments but crucially depends on their meanings also. In the next section, we will consider the potential that this verb has for participating in the transitive/intransitive alternation, sense by sense (cf. Langacker 1999: 315).

3.2. Alternation potential of the verb *pìt* 'close' in each meaning

As reviewed in section 2, Levin and Rappaport (1994), who take the lexically-oriented approach, observe that the selectional restrictions on the subject of the intransitive and the object of the corresponding transi-

tive are not identical. The referents which occur as the object of the transitive are found to be more varied than those which occur as the subject of the intransitive, hence the basicness of the transitive variant. They also briefly mention that some alternating transitive verbs have an intransitive use only for certain choices of arguments. Montemagni and Pirrelli (1995) and Montemagni, Pirelli and Ruimy (1995) investigate the role of the semantics of the arguments of the alternating verbs in Italian in depth and make an important claim that the causative/inchoative alternation in Italian is sensitive to the semantics of the arguments. In this section, I will examine the alternation potential of the verb *pìt* 'close' in each meaning. The alternation is considered confirmed if both variants of a verb retain the same core meaning, or in other words, if both variants express the same change of state. This point will be clarified below. In giving examples of transitive and intransitive verb pairs to illustrate the alternation potential of the verb in each meaning, the full sentences are not spelled out for reasons of space. The translations given to the Thai examples below are thus the word-for-word ones. However, the verb below will be glossed only in the inchoative meaning but it should be kept in mind that the stative meaning is also theoretically possible. It is noted that some counterparts will be acceptable only if they are combined with certain modifying elements. It is found that the intransitive *pìt* can have transitive counterparts in only two out of the four meanings we previously discussed (cf. section 3.1).

The two meanings in which the intransitive *pìt* can alternate are:

- The first meaning: for an entity to change from being open to not being open, i. e. to become shut, as in *pràtuu pìt/pìt pràtuu* 'door close/close door'.
- The second meaning: for a business establishment, office, institute to cease to operate either temporarily or permanently, as in *thanakhaan pìt/pìt thanaakhaan* 'bank close/close bank'.

It should be noted that the intransitive *pìt* which occurs with a certain subject argument cannot participate in the alternation even though it has the prototypical meaning, such as *rimfĭipàak pìt/* pìt rimfĭipàak* '(mouth lips) close/close mouth lips'. Another verb pair requires some discussion, namely, *taa pìt/pìt taa* 'eye close/close eye'. Although the intransitive *pìt* can participate in the alternation, the meanings of the two variants have subtle differences. The intransitive variant indicates that the eyelids are lowered in order to close the eyes whereas the transitive one implies that the agent covers his own eyes with something. It is thus obvious that, in

addition to the meaning of the verb, the semantic properties of the subject argument are also important in determining whether the intransitive verb will have the transitive variant or not.

The two meanings in which the intransitive *pìt* cannot alternate are:

- The third meaning: for an association to become restricted to only a group of people, rather than be open to the public, as in *pràtuu phák pìt/* pìt pràtuu phák* 'door of a political party close/close door of a political party'. Note that the transitive variant with the object argument *pràtuu phák* is grammatically well-formed but it is starred as not constituting a valid transitive counterpart because its core meaning differs unsystematically from that of the intransitive verb. That is, the transitive variant has the meaning of physically shutting something.
- The fourth meaning: for the stock market to stop moving up and down at the end of a workday, as in *dàtchanee pìt thîi rádàp…/*khǎw pìt dàtchanee thîi rádàp…* 'stock index close at…./he close stock index at….'

Notice that the meanings in which the intransitive *pìt* can alternate are the prototypical meaning and the extended meaning which constitutes a factor which causes the termination of an event carried out over an extended period of time. The two meanings in which it cannot alternate are both the extended meanings of the prototypical one. They constitute the consequences of the action of closing a place. The intransitive *pìt* can have a transitive variant if it is pragmatically possible to add a causal participant to initiate the change of state indicated by the intransitive. Real-world knowledge plays a crucial role in determining such a possibility.

The transitive *pìt* can alternate in eight meanings and cannot alternate in four meanings listed below.

The eight meanings in which the transitive *pìt* can alternate are:

- The first meaning: for X to move so that an opening is obstructed, to shut, as in *pìt pràtuu/pràtuu pìt* 'close door/door close'.
- The fourth meaning: for X to put business activities or operation to a stop either temporarily or permanently, as in *pìt kìtchakaan/kìtchakaan pìt* 'stop business affairs/business affairs stop'.
- The fifth meaning: for X to turn off an electric or mechanical device, as in *pìt phátlom/phátlom pìt* 'turn off fan/fan turn off'.
- The sixth meaning: for X to close an account or a legal case, to terminate a project, as in *pìt khadii/khadii pìt* 'close legal case, legal case close'.

- The seventh meaning: for X to discontinue the use or functioning of a place or establishment, as in *pìt thâaria*/*thâaria pìt* 'close seaport/seaport close'.
- The eight meaning: for X to block passage or access to a place, as in *pìt nâanfáa*/*nâanfáa pìt* 'close airspace/airspace close'.
- The eleventh meaning: for X to prevent an opportunity from occurring, as in *pìt òokàat*/*òokàat pìt* 'close opportunity/opportunity close'.
- The twelfth meaning: for X to end an activity, as in *pìt kaanceeracaa*/*kaanceeracaa pìt* 'end negotiation/negotiation end'.

It should be noted that the first and the second meanings of the transitive *pìt* contain the same core semantic element as the first and the second meanings of the intransitive *pìt.* The transitive variant adds only the causing participant to the intransitive one.

The four meanings in which the transitive *pìt* cannot alternate are:

- The second meaning: for X to cover something, as in *pìt râaŋkaay*/**râaŋkaay pìt* 'cover human body/human body cover'.
- The third meaning: for X to stick, glue, affix something (on something else), as in *pìt thɔɔŋ*/* *thɔɔŋ pìt* 'applying gold leaves (on something)/gold apply'.
- The ninth meaning: for X to hide or conceal something (feelings, information), as in *pìt khàaw*/**khàaw pìt* 'conceal news/news conceal'.
- The tenth meaning: for X to conceal (something) from somebody, as in *pìt tamrùat*/**tamrùat pìt* 'hide (something) from the police/police hide'.

Some generalizations can be drawn from the findings above. The transitive variants of *pìt* in the meanings in which they cannot alternate do not change the states of the direct object arguments after the completion of the actions denoted by the main verbs. The transitive *pìt* in the third and the ninth meanings can only change the location of the direct object argument. The direct object argument of *pìt* in the ninth meaning can be considered to be abstractly moved to a secret place. The direct object arguments of the nonalternating transitive *pìt* in the remaining two meanings, namely, the second and the tenth meanings, are the goal of the actions expressed by transitive *pìt*. On the contrary, the state of the direct object arguments of the alternating transitive *pìt* other than the location is changed in some way. These changed-of-state arguments can be considered the themes of the main verbs. It can be concluded at this point that the transitive *pìt* can participate in the causative/inchoative alternation

only in its usages which require theme arguments as the direct objects. Note that themes are conceptually distinct from objects. In Langacker's terms, themes encode complex relationships, both atemporal and processual, whereas objects designate entities (Langacker 1999: 30–32, passim).

In summary, the findings presented in this section indicate that the semantics of the subject arguments of the intransitive variants and that of the object arguments of the transitive ones play a crucial role in determining whether or not the variants can alternate. Another crucial factor which determines the alternation potential of the two Thai verbs is the real-world knowledge as indicated above.

4. A cognitive account

In this section, I will provide an analysis of the causative/inchoative alternation in Thai from the cognitive linguistic perspective. The cognitive account of the Thai causative/inchaotive alternation to be presented below will be contrasted with the lexically-oriented analysis of the causative/inchoative alternation presented in Levin and Rappaport (1994, 1995). This section divides into two subsections. Section 4.1 deals with the controversial polysemous status of the verb under investigation, whereas section 4.2 deals with the question of whether or not there is a derivational process between the causative and inchoative alternants.

4.1. The polysemy issue

The verbs which participate in the causative/inchoative alternation in various languages especially English have triggered debates as to whether the alternating verbs consitute a case of polysemy or not. I will elaborate on this issue by focusing on the Thai verb under investigation and present a cognitive account in light of the findings from the corpus discussed in section 3. There are two types of polysemy which need to be discussed. The first type is the polysemy across syntactic constructions whereas the second one is the polysemy within the same syntactic construction.

4.1.1. Polysemy across syntactic contexts

A number of publications beginning with Apresjan (1974) identify regular shifts in meaning of particular classes of words including verbs as a kind of polysemy called "regular polysemy". According to Apresjan, the tran-

sitive and intransitive variants which are identical in phonological form and which have the same arguments appearing as the direct object and the subject, respectively, will constitute a case of regular polysemy, for example, *tônmáy khôon* 'The tree fell' and *khǎw khôon tônmáy* 'He felled the tree'. Note that the intransitive version of 'fell' cannot take the *-ed* tense/aspect suffix, whereas the transitive version does. This correlates with clear grammatical and conceptual differences in the situations that each form designates. The intransitive usage invokes a trajector acting in a "reflexive" sense, whereas the salient perspective on the transitive usage is one that is external to the entity that falls. In addition, when a tree falls, it oftentimes comes out at the roots, but when one cuts a tree down, there is usually a quite perceptible stump remaining with the roots still in the ground and retaining the canonical vertical orientation of the tree. This underscores, of course, a central claim of Cognitive Grammar that all the grammatical elements of a language are meaningful (Langacker 1999: 43; cf. also 1999: 347). The two variants are thus polysemous across syntactic constructions but the core meaning, which is the change of state of the tree, remains the same.

However, the notion of regular polysemy is discarded in this study. In other words, the phonologically identical verb forms which alternate between the transitive and intransitive constructions are no longer considered a case of regular polysemy any more. The two variants are considered as constituting a monosemous verb since they are semantically drawn from the same background frame or "scene" rich with world and cultural knowledge according to the theory of Frame Semantics advanced by Fillmore (1976). A scene is characterized as an idealization of a "coherent individuatable perception, memory, experience, action, or object" (Fillmore 1977: 84). Fillmore's terms "scene" and "frame" correspond to Langacker's term "cognitive domain" in Cognitive Grammar (Langacker 1991: 3). Langacker claims that most lexical items have a considerable array of related meanings, which are represented in network form. The meaning of a lexical item, which is called the semantic structure must be equated with the entire network. The semantic structures of lexical items are characterized relative to "cognitive domains", which are scenes or frames in Fillmore's terms and are encyclopedic in nature. The claim that I am arguing for is that the transitive and intransitive variants which are phonologically identical and are combined with the same theme arguments are semantically relativized to the same scene or frame in Fillmore's terms, or the same cognitive domain in Langacker's terms. It is the difference in construction which gives rise to the apparent difference

in verb meaning as elaborated below. As Langacker notes, grammatical structure is almost entirely overt and differences in constructions reflect distinct conceptualizations (Langacker 1999: 321, 328).

Langacker (1991) regards transitive and intransitive constructions as significant grammatical constructs which reflect a specific model of human conceptualizations of events, namely, the causal chain model. A causal chain is initiated in an action carried out by a sentient entity doing something which results in the transmission of energy to another entity. The causal chain progresses from point to point along the chain until the energy is exhausted. The last entity represented by the ending point of the chain merely absorbs the energy transmitted. The causal chain ends up in a final resulting subevent. The transitive construction represents the full causal chain in which both the first and the last participants are present. On the other hand, the intransitive construction represents only the last segment of the causal chain. It designates either the changing of state of an entity after receiving a transmission of energy or the resulting state after changing from a previous state. The two constructions serve to express different construals, or in other words, point to different facets of the same cognitive domain of a single verb. We can thus conclude that the observed differences in meaning of the alternating verb forms are attributed to the different constructions which the verb forms is found in. This conclusion underscores the central claim of Construction Grammar which states that constructions, which are the basic units of language, carry meaning, independently of the words in the sentence (Goldberg 1995). In light of this cognitive analysis of the two Thai verbs, the notion of regular polysemy is no longer tenable.

4.2.1. Polysemy within the same syntactic context

Another type of polysemy may arise when we encounter different, but somewhat related, meanings of the same verb occurring within the same syntactic construction, but in combination with different noun arguments. These different meanings are listed in section 3.1.1. Each grouping of meanings forms a criss-crossing network of semantic similarities and differences. A question thus arises as to whether the extended meanings in each semantic grouping are a case of polysemy or monosemy. A polysemous lexical category refers to a lexical item with distinct but related meanings whereas a monosemous lexical category refers to a lexical item having different contextually induced semantic variations which are unified under a general meaning. Monosemy is hence alternatively called

"abstraction", "vagueness", or "generality". A number of linguists especially the cognitively oriented ones such as Geeraerts (1993), Tuggy (1993), Zlatev (in press), argue that the distinction between polysemy and monosemy is blurred. It is in practice difficult to determine if the two uses of a linguistic form instantiate two distinct meanings, or merely reflect two contextually generated examplars of a single meaning. In this paper, I make no attempt to determine which clusters of meanings are a case of polysemy and monosemy. Instead, I will focus on the type of meaning extension which is at work in the two groupings of meanings listed in 3.1.1.

A number of linguists working on lexical semantics, such as Cruse (1986), Jongen (1985), and Taylor (1995), investigate semantic variations of nouns when they occur in various contexts. They argue that semantic variations of nouns primarily result from a process called "metonymic extension". The term "metonymy" refers to a process of establishing connections between entities which co-occur within a given conceptual structure. For example, the Thai term *mɨɨ khwǎa* with the literal meaning 'right hand' is used metonymically to refer to our most important assistant who helps with our work. This is typologically the functional equivalent of the English expression "my righthand man". It is found that, in talking about an entity in a certain context, we frequently highlight, profile, or "promote" in Cruse's terms, different aspects of its conceptualization. For example, in *washing a car,* we think of the car's exterior; in *vacuum-clean the car,* we think of the car's interior; in *service a car*, the moving parts of the car come to our mind first (Cruse 1986: 52). Cruse regards such meaning variations of *car* as contextual modulations rather than as a case of polysemy.

Dirven et al. (1982) postulates the term "perspectivization" to refer to the process of highlighting or promoting certain facets of a conceptual structure. The notion of perspectivization is also applied to verbs. For example, Jongen (1985) describes the meaning of the French verb *fermer* 'to close' as an act involving the maneuvering of some device with respect to a container, with the purpose of preventing access to, or escape from, the container. It is obvious that there are two closely associated components in this semantic description, namely, maneuvering the closing device, and blocking access to the container. It is argued that the verb *close* is used in at least two quite distinct ways which reflect the semantic distinction mentioned above. In *close the box,* the process of closing is perspectivized in its entirety. In *close the lid,* only the closing device which is maneuvered is perspectivized. In this case, it seems that the notion of

perspectivization also applies well with verbs. However, a problem arises when we encounter such phrases as *leave a room* and *leave something in a room.* The first phrase perspectivizes the movement of an entity from the inside of an enclosed space. An implication of leaving an enclosed space is that one moves away from the entities which are still inside the enclosed space. According to Taylor (1995), it is through a perspectivization of this implication that the second phrase comes to exhibit the meaning 'not to be accompanied by' or 'not to take with one'. The term "implication" corresponds to what I called "consequence" and "implicature" in section 3.1.2. However, in some cases there may be uncertainty as to which semantic component of the verb is implicated as suggested by Taylor (1995: 125). The set of possible implications attendant to the use of a given verb may be numerous. Furthermore, it is rather unpredictable what implications a verb indicates unless it is placed within a context.

It is obvious from the examples above that both nouns and verbs exhibit semantic variations when they occur in combination with other linguistic expressions. A transitive verb bears on the interpretation of its direct object argument, such as in the case of *car* above. Vice versa, a direct object argument affects the interpretation of a transitive verb which it co-occurs with, such as in the case of *close* and *leave.* A crucial question which arises here is whether meaning extension of nouns is actualized by means of the same process as that of verbs or not. In the *car* example above, although different parts of the car are profiled or perspectivized by different transitive verbs which they co-occur with, the non-profiled or non-perspectivized parts of the car in each instance are conceptually present in the mind of the speaker and hearer. They are merely backgrounded. Semantic traits of a noun especially in its prototypical meaning are not "in competition" with one another; the semantic traits of the noun co-exist in the semantic interpretation. On the contrary, when a verb is combined with a direct object argument, a certain implication of the verb usually figures in the interpretation whereas some others are neither relevant nor conceptually present. For example, in the case of *leave* above, the implication of moving away from the entities inside the enclosed space is not conceptually present in the interpretation of *leave a room*. We can see that implications of a verb are in competition with one another in its semantic interpretation. It is thus obvious that the interpretation of both nouns and verbs is affected by the presence of their co-occurring linguistic elements, which gives rise to meaning extensions of nouns and verbs in syntagmatic context. However, I argue in this study that meaning extensions of nouns take place by means of a different

process from that of verbs, especially as they relate to prototypical members of the categories. Meaning extensions of nouns are primarily realized by means of profiling, highlighting, promoting or perspectivizing certain facets of the conceptual structures of nouns, and demoting or backgrounding some other facets. On the other hand, meaning extensions of verbs are primarily realized by means of a different process called "meaning selection". Meaning selection is a process whereby an implication of the conceptual structure of a verb is selected whereas other implications are suppressed, so that the semantics of the verb will fit that of a noun it is combined with, especially a subject noun when the verb is intransitive and a direct object noun when it is transitive. Meaning selection does apply to a verb even if it is used in its prototypical meaning. In non-prototypical uses, metaphoric extension further applies after meaning selection. It should be noted that both perspectivization and meaning selection may be in operation simultaneously in the semantic interpretation of a sentence. However, the exact procedure of how the two processes operate simultaneously to give rise to a certain sentential meaning is beyond the scope of this study and thus constitutes a topic for further research.

The fact that meanings of nouns and verbs extend primarily by different means is motivated by the characteristic properties of the noun and verb categories themselves. A number of psychologists working on languages, such as Gentner (1981), Gentner and France (1988), and Clark (1993), make a common set of claims regarding nouns and verbs as follows.

- Nouns can be seen as pointing to objects in the world. Therefore, perceptual information figures significantly in their meanings. Their meanings are highly constrained by the nature of the physical world. In contrast, verbs express relational meanings which depend on abstract concepts, and are thus less constrained by the physical world than nouns.
- Event and action categories have vaguer boundaries than entity categories. For example, it is rather difficult to decide when an act of closing begins, and when it ends. It follows that the boundary of the conceptual structure of a noun is more well-defined than that of a verb.
- Nouns act like unified concepts. The semantic components of nouns are more highly interrelated with one another and more redundant than those of verbs.

– The fact that verbs express abstract relations and that their boundaries are not well-defined leads to a conclusion that verbs are less semantically coherent and less stable than nouns.

In view of the characteristics listed above, verb meanings are more flexible, more semantically dependent, and more semantically underspecified than noun meanings. On this basis, the former are more likely to change, vary, and extend than the latter. Gentner and France (1988) demonstrated the high mutability effect of verbs by conducting an experiment in which subjects were presented with sentences containing verbs in conjunction with nouns that violate the verbs' selectional restrictions. When the subjects were asked to paraphrase the sentences, they assigned novel interpretations to the verbs but did not modify the literal meanings of the nouns. Gentner and France concluded that verb meanings are more easily altered because they are less coherent and more flexible than nouns.

This fact is also supported by a piece of corpus evidence provided by Fellbaum (1990), who notes that the English language has far fewer verbs than nouns. For example, the number of nouns in the *Collins English Dictionary* totals 43,636 and that of verbs totals 14, 190. Moreover, verbs are more polysemous than nouns. The English nouns in *Collins English Dictionary* have on the average 1.74 senses, whereas verbs average 2.11 senses (Fellbaum 1990: 278).

The fact that semantic components of a noun are relatively highly interrelated and redundant allows some facet of the conceptual structure of the noun to be easily perspectivized, hence the predominance of metonymy as meaning extension in the case of nouns. Since verb meanings are more semantically dependent, more semantically underspecified, less stable, less densely interrelated and less constrained by the physical world than those of nouns, verbs are greatly open to semantic adjustment and variation when they co-occur with nouns. This accounts for an observation made by Taylor (1995) that in some cases there may be uncertainty as to which semantic component of the verb is implicated.

4.1.3. Which alternant is basic and derived?

In this section, I have argued against Levin and Rappaport's claims regarding the causative/inchoative alternation. To recapitulate, they argue that alternating intransitive verbs are externally caused and are thus derived from dyadic transitive verbs. Causative verbs do detransitivize only under specific circumstances. Even though no external cause is linguisti-

cally present in the case of alternating intransitive verbs, they claim that our real-world knowledge tells us that the events indicated by these verbs could not have happened without an external cause.

In this paper, I argue that the above claims are no longer tenable from a cognitive point of view. I have demonstrated that the verb *pìt* 'close', in both transitive and intransitive uses, can alternate in certain meanings only. The subject argument of the intransitive form and the object argument of the transitive form do play a crucial role in determining whether the verb form in question can alternate or not. It is found in section 3.2 that there are two meanings of the intransitive *pìt*, and eight meanings of the transitive *pìt*, which can alternate. That means only the intransitive forms of *pìt* 'close' in these meanings can be referred to as "alternating intransitive forms".

However, it is not true that these alternating intransitive verbs are derived from the transitive counterparts. In actuality, we cannot be assured what causes the change of state in question. The intransitive verb with the inchoative reading designates a change of state as if occurring on its own, whereas the one with the stative reading designates a resulting state regardless of there being a causing participant or not. Furthermore, the verb *pìt* in some alternations, for instance, *taa pìt/pìt taa*, literally, 'eye close/close eye', does not designate the same change of state. The intransitive variant indicates that the eyelids are lowered in order to close the eyes whereas the transitive one indicates that an agent covers his eyes with something. It can be concluded at this point that the change of state which is expressed by an intransitive variant may be different from the one embedded in a transitive variant. Moreover, the intransitive and transitive variants may convey different implications. In many such cases, the transitive variant does not merely serve to add a causing participant to the intransitive one. Vice versa, the intransitive variant does not merely leave out a causing participant with everything else being semantically the same as the transitive one.

Taking into consideration the facts that (a) there are intransitive and transitive forms in many meanings which cannot alternate, (b) the intransitive forms designate the events which are abstracted away from whatever that causes them, and (c) some transitive and intransitive alternants convey different implications and do not indicate the same change of state, I therefore claim that the verb and its noun argument(s), occurring either as transitive or intransitive constructions, express distinct gestalts, and that each sentence containing a transitive or an intransitive verb is basic in its own right. This claim is based on the principle of partial

semantic compositionality as propounded by Langacker (1987: 448–452). Semantic compositionality pertains to the degree to which the semantic value of the whole is predictable from the semantic values of its components. Langacker's Cognitive Grammar denies the doctrine of full compositionality, which states that the meaning of a composite expression is derived only from its components. Instead, the principle of partial compositionality is adopted, which states the actual semantic value of a composite expression is derived partly from the semantic values of its components and partly from real-world knowledge, speech situation in which it is grounded and the speaker's awareness of contextual factors.

The role of lexical items and compositional principles is thus restricted to merely suggest, evoke, and partially constrain an expression's meaning; it is not sufficient for predicting a verb's meaning or for constituting it wholly. Each sentence containing the verb *pìt* 'close' in its transitive and intransitive uses expresses a gestalt which is derived partly from the meanings of its distinct substructures and substantially from its context and the encyclopedic knowledge of the speakers and hearers. Each variant is basic in its own right.

5. Conclusion

In this paper, a cognitive account of the causative/inchoative alternation in Thai is presented through a corpus-based case study of a Thai verb which notably participates in this alternation, namely, *pìt* 'close'. This paper argues specifically against Levin and Rappaport's lexical analysis of this phenomemon (1994, 1995) and advances the following claims. A verb form which alternates between the transitive and intransitive uses is not an instance of polysemy of any sort. The meaning of the verb form remains constant in both syntactic uses since it is drawn from the same background knowledge frame. The meaning difference arising from these two uses is arguably due to the construal of the different constructions in which the verb forms are found. It is also found that the semantic properties of the noun argument(s) occurring with a given verb form in a sentence bears on the prediction whether or not the verb form has a transitive/intransitive counterpart. A verb form in combination with different noun arguments in both syntactic uses exhibits a high multiplicity of meanings which forms a criss-crossing network of similarities and differences. It is found that the multiplicity of meanings of a verb form results from the processes of meaning selection and metaphoric exten-

sion. The fact that the verb form is so susceptible to semantic variation arguably results from characteristic properties of the verb category as opposed to those of the noun category. It is also found that a verb form and its noun argument(s), occurring either in transitive or intransitive constructions, jointly express a gestalt. Each sentence containing a transitive or intransitive verb form is basic in its own right. Therefore, neither detransitivization nor causativization exist in this analysis as autonomous syntactic rules with fully predictable outputs.

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Conceptual metaphors motivating the use of Thai 'face'

Margaret Ukosakul

1. Introduction

This paper presents a semantic analysis of Thai 'face' idioms along the lines of Lakoff and Johnson (1980) and Lakoff (1987). It reveals that the word *nâa* 'face' is used metaphorically to represent the person. It will be shown that the Thai concept of face is closely related to the concepts of honor and shame. The emotion of shame as expressed through many Thai 'face' idioms can be seen within a larger framework encompassing a sequence of several phases, including the causes of shame as well as its consequences. This prototypical scenario of shame is very much in the same spirit as that of Kövecses' well-known model for English *anger* (1986).

The findings in this study were derived from an analysis of a collection of 170 Thai idioms based on the body part *nâa* 'face', compiled from different sources such as interviews, dictionaries, books, radio and television.[1] The analysis of these idioms was carried out according to Lakoff and Johnson's view of Conceptual Metaphor, whose premise is that metaphorical expressions in language are a result of metaphorical thought processes (1980: 6). This has been supplemented by a number of observations based on Langacker's work (1987, 1988, 1991) as well as that of Kövecses (1986). Steen's (1999) five-step procedure for determining conceptual metaphor was also useful in the analysis of the Thai 'face' idioms.

In Section 2, I discuss prior research that has been done on Thai 'face' idioms. Section 3 presents the metaphorical uses of *nâa* 'face'. Elaborations of this metaphor focus on psycho-social aspects of a person, namely, one's personality, countenance, honor and emotions. Section 4 brings together all the idioms that have to do with shame into a single framework-a scenario which includes the causes of shame, the reactions to shame and the actions to remove this shame.

2. Related research

Although the concept of 'face' has been studied by social scientists, particularly in Asian contexts such as Japanese and Chinese, very little linguistic research has been done on Thai metaphors built on *nâa* 'face'. The single article written from the anthropological linguistics approach on Thai 'face' idioms is that of Sanit (1975).

For the Thai, *nâa* 'face' is metaphorically related to ego, self-identity, dignity and pride (Ukosakul 1994). Komin (1990) suggests that the Thai see 'face' as identical to 'ego.' As such, the Thai cannot tolerate any violation of the "'ego' self" (Komin 1990: 161). This ego orientation underlies other cultural values such as 'face-saving' and 'criticism-avoidance.' If one gains face, *dâj nâa* as they say in Thai, one will feel good. Conversely, losing face and experiencing embarrassment are to be avoided.

Sanit (1975) describes the folk model motivating the multiferous usages of *nâa* 'face' in the Thai culture. The face, being part of the head, is sacred while the feet are inferior. The face is regarded as the 'representation of the person' (Sanit 1975: 496). The feet, on the other hand, are considered extremely profane and dirty. Hence, even calling attention to the foot requires one to say, "Excuse me" (Preecha 1992). Thai children are taught from very young that it is a serious insult to direct the sole of the foot towards another person. These examples show that the Thai use body parts metaphorically to express other meanings according to their culture.

3. The metaphorical uses of *naâ*

Thai idioms built around the concept of 'face' are overwhelmingly devoted to describing people, whether they have to do with describing one's personality, emotions, countenance or honor. Using the notion of domains (cf. Croft, 1993; Langacker 1987), the mapping of *nâa* 'face' to its metaphorical extensions can depicted diagrammatically as in Figure 1.

From Figure 1, we see that the two domains in the overall matrix for the concept of [PERSON] are the physical body and the psycho-social domains. The physical face is mapped onto the non-physical domains of the person, namely, personality, countenance, honor and emotions.

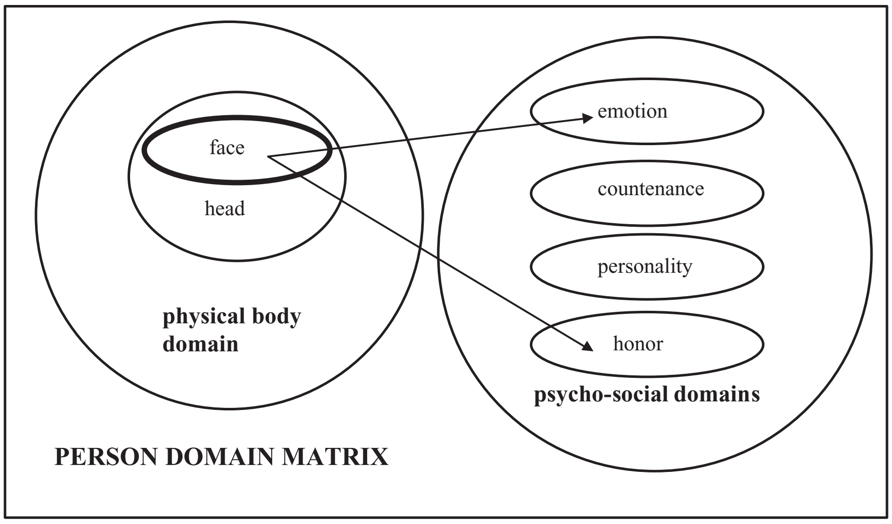


Figure 1. Metaphorical extensions of 'face'

3.1. The external vis à vis the internal

The face is external and is usually the focus of attention when we look at a person. While the face is external, it is conventionally construed as reflecting a person's internal states, such as one's personality or emotions. However, idioms (1) to (3) describe otherwise:[2]

(1) *pʰûak kʰon* ***nâa sɨ̂ɨ caj kʰót*** *jàaŋ nán sàk*
group person face straight heart crooked like that just
wan nɨ̀ŋ tʰúk kʰon càʔ tɔ̂ŋ rúu wâa tua ciŋ kʰɔ̌ɔŋ
day one every person will must know that self real POSS
pʰûak kʰǎw lewráaj kʰɛ̂ɛnǎj
group them evil how much
'A real **hypocrite** like that-one day, everyone will know how evil his real self is.'

(2) *mâj mi kʰraj rúu kʰwaamciŋ rɔ̀ɔk wâa cʰǎn tʰúkcaj*
NEG has anyone know truth PRT if I sad
kʰɛ̂ɛnǎj tʰúk wan níi kɔ̂ɔ ***nâa cʰɨ̂ɨn ʔòk***
how much every day this then face cheerful chest
trom *juu kʰon diaw*
sorrowful remain person alone
'Nobody really knows the truth about how much sorrow I have in my heart. Everyday I **smile outside but am sad inside** all by myself.'

(3) *t^hâa k^hăw maa tiisanìt kàp t^həə jàa p^hɨ̂ŋ wájcaj*
if he come befriend with you don't just trust
ná? *láaj k^hon bɔ̀ɔk wâa k^hăw pen k^hon* ***nâa nɨ́a***
PRT:OK? several people say that he is person face deer
caj sɨ̌a *wáwjcaj mâj dâj*
heart tiger trust NEG can
'If he comes and befriends you, don't trust him yet. Several people have said that he is **a wolf in sheep's clothing**-he cannot be trusted.'

(1) to (3) reveal a contrast between what is external (the face *nâa*) and what is internal and unobservable (the heart *caj* or chest *ʔok*). The face and the heart belong to the same person. Therefore, one would expect that they would agree with each other. However, in (1), the face is straight but the heart is crooked; in (2), the face is cheerful but the chest is sad;[3] in (3), the face belongs to a deer[4] (which is seen as a harmless animal) but the heart is a tiger's (a dangerous animal). The antonymous lexical pairs which occur with 'face' and 'heart' are used to express some sense of hypocrisy.

Another way to express hypocrisy is to say that a person is two-faced, as (4) illustrates:

(4) *chăn mâj k^həəj k^hít ləəj wâa t^həə cà? pen* ***k^hon sɔ̌ɔŋ***
I NEG ever think at all that you will be person two
nâa *welaa jùu tɔ̂ɔ nâa kɔ̂ɔ t^ham dii kàp c^hăn tɛ̂ɛ*
face time stay before face CONN do good with me but
láplăŋ klàp wâa c^hăn sĭasĭahăjhăj
behind turn back say I Idiom:bad
'I never knew you were a **hypocrite**; in front of me you were nice, but behind my back, you said bad things about me.'

Since the Thai consider the face as the "representation of ego" (Sanit 1975) and the face is used to represent a person's identity, one can now see why (4) a 'two-faced person' *k^hon sɔ̌ɔŋ nâa* would be a hypocrite. A hypocrite then could be said to have two personalities, each personality is revealed at a different time to different people.

(5) is an insult which is usually uttered in a moment of anger. This example is interesting because it illustrates the fact that we can meld contradictory mental models into a coherent meaningful whole (cf. Langacker 1987: 114, 143). The verb *klìat* is a very strong word which means

'to hate, or to abhor.' The phrase *kʰîi nâa* 'the excrement of the face' always carries a negative connotation. The motivation behind the use of this phrase is cultural: the face is sacred for the Thai and has positive value, but excrement is dirty and has negative value.[5] To say that a person's face has excrement therefore would be highly insulting.

(5) *cʰăn* ***klìat kʰîi nâa*** *pʰûak kʰăw pʰrɔ́ʔ kʰăw*
I hate excrement face group them because they
duutʰùuk tʰîi raw con
look down that we poor
'I **hate** them because they look down on us since we are poor.'

3.2. 'Face' and honor

A considerable number of Thai 'face' idioms describe the notion of honor. The term 'honor' as used in this study encompasses all the concepts related to reputation, dignity, fame, prestige, self-esteem or respect. Honor can be gained or lost, as seen from (6) and (7) below:

(6) *mâj wâa càʔ pen ŋaan kaankusŏn tʰîinăj kʰunjĭŋ*
NEG matter will be event charity where Lady
sŏmcaj mâj khəəj phlâat mâj rúu càʔ jàak ***dâj nâa***
Somchai NEG ever miss NEG know will want gain face
paj tʰɨ̆ŋ năj
DirP:go until where
'It doesn't matter which charity function it is; Lady Somchai never misses it. I simply cannot comprehend the extent to which she wants **to receive praise or recognition**.'

(7) *kʰruu kʰuj kàp kʰon ʔɨ̀ɨn wáj mâak wâa tʰəə*
teacher speak with people other already much that you
tɔ̂ɔŋ cʰanáʔ lɔ̂ət kaankʰèŋkʰăn kʰráŋ nìi nɛ̂ɛ jàa tʰam
must win first competition time this surely don't make
hâj kʰruu ***sĭa nâa*** *kɔ̂ɔ lɛ́ɛw kan*
AUX teacher lose face CONN INTERJ
'Teacher speaking: "I have told everyone else that you will win this competition. So make sure you don't make me **feel humiliated**."'

When one *dâj nâa* (6) 'gains face', more recognition, and therefore more honor, is obtained. The opposite of *dâj nâa* would be to do something to make one *sǐa nâa* (7) 'lose face' resulting in the loss of one's honor. These are analyzed as literal expressions that modify *nâa* 'face.'

In (8), a physical action in itself disrespectful is used metaphorically to represent a behavioral action showing disrespect.

(8) *cʰăn mâj kʰəəj kʰít càʔ tʰam ʔaraj* ***kʰâam nâa*** *kʰâw*
I NEG ever think will do anything step over face her
sɨ̂ŋ pen kʰon rápp ʰìtcʰɔ̂ɔp doetroŋ tɔ̆ɔ rɨ̂aŋ nán tɛ̂ɛ
who is person responsible directly about matter that but
tʰĭi cʰăn tàtsĭncaj tʰɛɛn kʰâw paj wan nán
the fact that I decide on behalf her DirP:go day that
kɔ̂ɔ pʰrɔ́ʔ wâa raw mâj rúu wáa kʰăw jùu tʰîinăj
CONN because that we NEG know that she is where
'I never intended to **disregard** her who is the one responsible for that matter. But I had to make a decision on her behalf that day because we did not know where she was.'

The verb *kʰâam* means 'to step over (usually with one's feet).' When one *kʰâam nâa* 'steps over the face,' the feet (which the Thai consider as inferior and low) move into a position above the head (which is considered sacred and of high status). As we have discussed earlier, to point the feet at a person is taboo for the Thai. Hence, it is even worse to place the feet above one's head. The idiom *kʰâam nâa* describes the action of the agent on the patient (the owner of *nâa* in the idiom), and it is the patient who is being impacted negatively. This idiom makes use of the metaphor to DISREGARD ONE'S HONOR IS TO STEP OVER ONE'S FACE.

In (9) to (11), verbs that refer to physical hurt are used to describe the pychological damage to one's honor. The literal meanings of (9) to (11), *cʰìik nâa* 'to tear the face', *tɔ̀ɔk nâa* 'to hammer the face', and *hàk nâa*[6] 'to break the face' describe actions that are construed as causing physical hurt to the face but are conventionally understood as bringing psychological damage to another person.[7]

These three idioms describe the disregard of one's feelings through actions of one person which bring humiliation to another. The underlying conceptual metaphor is EMOTIONAL HURT IS PHYSICAL HURT. This is an example of a correlation-based metaphor (see Grady 1999).

(9) *kaan patisèet kʰɔ̂ɔsanɔ̌ə kʰɔ̌ɔŋ tʰânpratʰaan tɔ̀ɔ nâa tʰîi*
NOM reject suggestion POSS chairman before face at
pracʰum jàj tʰîi kʰun tʰam mɨ̂a cʰáw níi tʰɨ̌i
meeting big that you do when morning this consider
pen kaan ***cʰìik nâa*** *tʰân jàaŋ rɛɛŋ tʰiidiaw*
is NOM tear face his like serious absolutely
'Your rejecting the chairman's suggestion at the big meeting this morning was taken as seriously **humiliating** him.'

(10) *kʰǎw pʰûut mâj dii ləəj tʰùuk* ***tɔ̀ɔk nâa klàp***
he speak NEG good thus PASS hammer face back
'He did not speak nicely; thus he was **reproached without sparing his feelings**.'

(11) *tʰîi kʰun kʰátkʰáan kʰrooŋkaan rɔ́ɔj láan kʰɔ̌ɔŋ cʰǎn*
that you oppose project 100 million POSS mine
tɔ̀ɔ nâa câwnaaj mɨ̂awannii kʰun tɔ̂ɔŋkaan ***hak nâa***
before face boss yesterday you intend break face
cʰǎn câjmǎj
my yes or no
'That you opposed my 100 million baht project in front of the boss yesterday, were you intending to **make me feel ashamed**?'

Examples (9) to (11) above convey three distinct mental images – a torn face, a hammered face, and a broken face. Thus, there are three specific conceptual metaphors subsumed by the underlying metaphor EMOTIONAL HURT IS PHYSICAL HURT, namely, A HUMILIATED FACE IS A TORN FACE; A REPROACHED FACE IS A HAMMERED FACE; and, AN ASHAMED FACE IS A BROKEN FACE, illustrating the hierarchical organization of conceptual metaphors first discussed by Grady (1997).

The next idiom (12) *mii nâa* 'to have face' is an instance of irony where one says the opposite of what one means.

(12) *tɔ̌ɔnníi kʰrajkʰraj kɔ̂ɔ rúu lɛ́ɛw wâa kʰun pen kʰon*
now everyone thus know already that you are person
lɔ̀ɔkluaŋ tʰîisùt jaŋ càʔ ***mii nâa*** *maa koohòk cʰǎn*
deceiving the most still want have face come lie me
ʔìik rɨ̌ɨ
again QN
'Now everyone knows that you are a big cheat; yet you still **have the nerve to** lie to me.'

One uses this idiom with another if the other does not feel shame when he or she ought to, e. g., when he or she was caught cheating but does not feel any remorse. When one has done something to be rightfully ashamed of, one's honor is lost. Since the face is used to represent honor, one who has lost honor has 'lost face', suggesting that one has 'no face.' Therefore, when a person says *mii nâa* 'to have face' to someone else, he or she is being sarcastic and actually means 'you have no face (that is, no honor) left and yet you …' The person in uttering this idiom hopes to make the other feel the shame that he or she should have felt in the first place. In English, it would be similar to saying, "You still have the nerve to …"

3.3. 'Face' and the countenance

The smallest category of Thai 'face' idioms describe one's countenance. Two idioms, (13) and (14), are worth mentioning briefly. They both have the semantic component of 'fierceness.'

(13) *kʰun mâj pʰɔɔcaj ʔaraj kɔ̂ɔ bɔ̀ɔk pʰŏm maa*
you NEG satisfied anything CONN tell me DirP:come
ləəj diikwàa maa ***tʰam*** *nâa* ***ják*** *sàj kan*
right away better than come make face monster put on PRT
jàaŋ níi pʰom mâj cʰɔ̂ɔp
like this I NEG like
'If you are displeased about anything, it is better to let me know. I don't like you **making an angry face** like that.'

(14) *kʰunjaaj kʰâaŋ bâan níi nâaklua caŋ náʔ kɛɛ cʰɔ̂ɔp*
grandmother next house this fearsome very PRT she like
tʰam nâa maan *sàj pʰûak raw jùu rɨ̂aj*
make face devil put on groups us CONT always
'The old lady next door is fearsome; she often shows her **ferocious** face to us.'

A *ják* is a giant or ogre in Thai mythology. It looks ugly and ferocious. The word *maan* refers to the devil or demon, and the main attribute associated with *maan* is wickedness. Therefore, if one is described as making a *nâa ják* 'monster face' or *nâa maan* 'devil face', it implies that the

person looks very fierce. These idioms are sometimes used to describe a facial expression revealing intense anger or rage.

3.4 'Face' and the emotions

Of all the different semantic categories of Thai 'face' idioms, namely, range of personality, honor, emotions and countenance, the category of emotions contains the largest number of idioms (sixty-six altogether). Why is this so? The answer, of course, is that we express our emotions through the face and we perceive other people's emotions in part, at least, by the expressions on their faces. However, a person can sometimes choose not to reveal one's feelings, as (15) illustrates.

(15)	*k^hun*	*k^huan*	*sadɛɛŋ*	*k^hwaamrúusɨk*	*ʔɔ̀ɔk*	*maa*	*hâj*	*k^hăw*
	you	should	show	feeling	out	DirP:come	let	her
	rúu	*jàa*	*muatɛ̀ɛ*	***tii***	***nâa***	*jùu*	*ləəj*	
	know	don't	keep busy	strike	face	CONT	at all	

'You should let her know what you feel; don't always **conceal your emotions**.'

The verb *tii* 'to strike' is used in the sense of striking a heated metal in order to forge it into the required shape. Thus there is the idea of shaping an object. When one 'molds the face,' one is shaping the face to express an emotion which is not actually felt at that moment. The metaphor at work here is TO FEIGN AN EMOTION IS TO STRIKE THE FACE.[8] Figure 2 below shows how the idiom is mapped onto its metaphorical extensions:

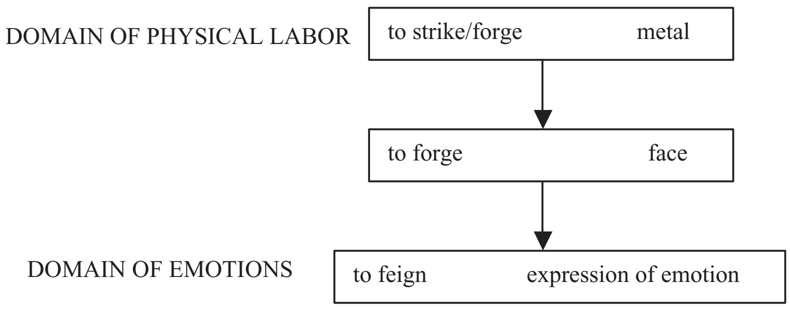


Figure 2. Metaphorical mapping of *tii nâa*

(16) also has the semantic component of shaping. The verb *pân* means 'to mold' as in molding a figure out of clay. *sǐi nâa* 'color of the face' is an idiom which refers to one's facial expression in general. (16) means 'to feign one's face' or 'to mask a falsehood.' The general conceptual metaphor underlying (15) and (16) is EXPRESSIONS (OF EMOTIONS) ARE OBJECTS THAT CAN BE MANIPULATED.

(16)

cʰăn	*lôək*	*kàp*	***kʰăw***	*lɛ́ɛw*	***pʰrɔ́ʔ***	*nùaj*	*lɨ̆akəən*	
I	broke off	with	him	already	because	tired	too much	
tʰîi	*tɔ̂ɔŋ*	*kʰɔɔj*	***pân***	***sǐi***	***nâa***	***jímjɛ́ɛm***	*lɔ̀ɔk*	*hâj*
that	must	regularly	mold	color	face	smile	deceive	let
kʰon	*ʔɨ̀ɨn*	*kʰít*	*wâa*	*raw*	*pen*	*kʰrɔ̂ɔpkʰrua*	*tʰîi*	*mii*
people	other	think	that	we	be	family	that	has
kʰwaamsùk								
happiness								

'I have broken off with him because I am sick and tired of always having to **put on a smiling face** in order to make others think that we are a happy family.'

The emotions that are expressed by 'face' idioms are anger, happiness, sadness, fear and shame. These accord well with cross-cultural correlates (Lakoff 1987: 38). Notice that the only positive emotion is happiness. The general metonymic principle underlying many of these idioms is THE PHYSIOLOGICAL EFFECTS OF AN EMOTION STAND FOR THE EMOTION (Lakoff 1987: 382).

3.5. Angry faces

The largest number of emotion idioms are those that express anger. (17) and (18) describe the physiological effects of anger. Consider (17) *lɨ̂at kʰɨ̂n nâa* 'blood go up the face.' When a person is very furious, there is an increase of blood pressure which forces more blood to go up to the face (Lakoff 1987: 382).

(17)

kʰăw	*kròot*	*con*	***lɨ̂at***	***kʰɨ̂n***	***nâa***	*mɨ̂a*	*tʰùuk*	*tɔ̀ɔwâa*
he	angry	until	blood	go up	face	when	PASS	scold
tʰáŋtʰáŋ	*tʰîi*	*mâj*	*pʰìt*					
despite	that	NEG	wrong					

'He was so **red with anger** when he was accused of wrongdoing despite the fact that he did not do any wrong.'

Sometimes, a person in a rage may lose control of himself and become violent and rash in his actions, for instance, he may hit or kill someone else. Lakoff (1987: 383) labeled this physiological effect of rage as "interference with accurate perception." (18) *nâa mɨ̂ɨt taa mua* 'dark face, blurred eyes' is used to describe such a person.

(18)

k^hăw	*kròot*	*k^hanàat*	***nâa***	***mɨ̂ɨt***	***taa***	***mua***	*con*	*k^hâa*
he	angry	as much as	face	dark	eye	blurred	until	kill
k^hon	*taaj*							
person	dead							

'He was so **enraged to the point that he was unable to think at all** and killed someone.'

The adjectives that collocate with 'face' and 'eyes' in (18) are 'dark' and 'blurred', respectively and the use of these words carries the implication of 'inability to see clearly.' Being unable to see clearly is used metaphorically to explain one's being unable to think clearly and rationally. This is an illustration of the conceptual metaphor THINKING IS SEEING. Figure 3 shows the mapping of the idiom to its meaning this way:

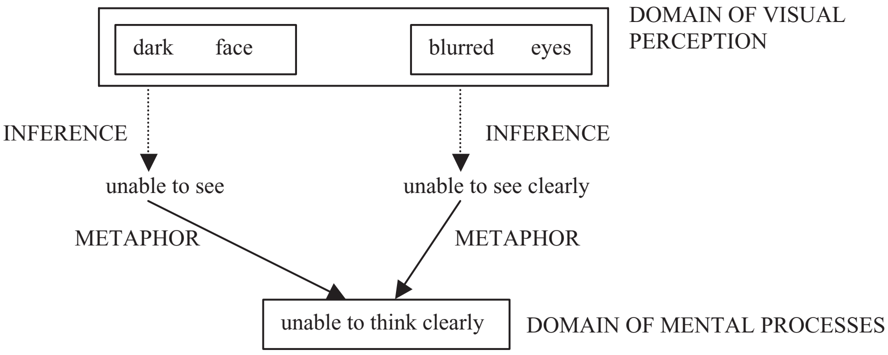


Figure 3. Metaphorical mapping of *nâa mɨ̂ɨt taa mua*

3.6. Happy, sad, and scared faces

I have to date encountered four 'face' idioms which describe the feeling of happiness. Lakoff and Johnson (1980) suggested that the feeling of happiness generally correlates with a feeling of expansiveness. Thus, it is

not surprising that wideness of the face describes a happy person, as seen in (19).

(19) *tâŋtɛ̀ɛ hŭanâa bɔ̀ɔk wâa càʔ dâj lɨ̂an tamnɛ̀ŋ níi* ***nâa***
since boss tell that will get move position this face
baan *mâj jɔɔm hùp ləəj náʔ*
wide NEG willing close at all EMP
'Since the boss told him that he has been promoted, he has been **looking so pleased** all the time.'

Two other compounds which mean 'happy' or 'cheerful' also make use of the adjective *baan* 'wide'. These are *cʰɨ̂ɨn baan* 'cheerful, wide' and *bə̀ək baan* 'expand wide.' In these three expressions, the underlying conceptual metaphor is A HAPPY FACE IS A WIDE FACE.

The antonym of happiness is sadness. Seven 'face' idioms were found to describe the feeling of sadness. One of them is (20) *nâa hɛ̂ɛŋ* 'dry face', illustrated in (20).

(20) *kʰăw tʰam* ***nâa hɛ̂ɛŋ*** *mɨa dâj kʰàaw wâa mâj tʰùuk*
he make face dry when get news that NEG PASS
lɨ̂ak pen hŭanâa pʰanɛ̀ɛk
chosen be head department
'He looked so **depressed** when he received the news that he was not chosen as the head of department.'

This idiom has several meanings: these include 'depressed', 'hungry' and 'broke'. Note that these meanings relate to states that are defined in terms of three distinct domains: (a) mental states (b) physiological conditions and (c) economic states. The concept of dryness is used to represent a lack of fluid in a container. In other words, 'dry' means empty. "Dry" also implies shrinkage (the opposite of expansiveness). The face is the container and the fluid in the container can be happiness, food in the stomach, or money. Hence, a 'dry face' is one that lacks happiness.[9]

Some 'face' idioms describe the emotion of fear, such as (21) below. The literal translation of this idiom describes a physiological effect of fear, namely, paleness of the face. As (21) graphically illustrates, chance juxtaposition of an ongoing event with an unexpected one can induce a strong reaction of fear.

(21) *naj k^{h}anàʔ t^{h}îi raw kamlaŋ faŋ rɨaŋ p^{h}ǐip^{h}ǐi kan*
in moment that we CONT listen story ghosts together
jùu jàaŋ tɨ̀ɨntên mǎa k^{h}âaŋ bâan kɔ̂ɔ rə̂əm hɔ̌ɔn
exist like excited dog next house then begin howl
k^{h}ɨ̂n p^{h}ûak raw kɔ̂ɔ ***nâa t^{h}ɔ̀ɔt sǐi*** *kan*
DirP:up group us then face remove color PRT
pen t^{h}ɛ̌ɛw
Idiom:one after another
'While we were listening to ghost stories, the neighbor's dog starting howling. All of us turned **pale with fright**!'[10]

3.7. Shameful faces

As mentioned earlier, the largest category of face idioms that express emotions has to do with anger. The next largest category, to which we now turn, consists of idioms that describe shame. When one loses one's honor, the result is a range of feelings from embarrassment (a weaker form of shame) to humiliation (a stronger version of shame).[11] The face is closely associated with shame. In fact, this association of face with shame is not limited just to Thai. English, for example, has the conventional expression 'shamefaced' which illustrates strikingly the connection between face and shame.

The emotional hurt of shame is sometimes compared to the physical hurt of being hit on the face. The metaphor at work here is EMOTIONAL HURT IS PHYSICAL HURT. As such, we have the idiom *nâa tɛ̀ɛk* (22) 'broken face.' One's face can be broken when one is hit very hard on the face. In the same way, a person's honor can be 'broken' when that person is embarrassed or humiliated in front of others.

(22) *mɔɔŋ càak k^{h}âaŋlǎŋ k^{h}ǎw mɨan t^{h}əə mâak ləəj*
see from back she alike you much EMP
náʔ c^{h}ǎn jaŋ k^{h}əəj ***nâa tɛ̀ɛk*** *p^{h}rɔ́ʔ*
PRT:you know I still ever face broken because
t^{h}ák p^{h}ìt k^{h}ít wâa k^{h}ǎw pen t^{h}əə
greet wrong think that she is you
'From the back, she looks so much like you. I have even been **embarrassed** because I greeted her thinking she was you!'

Another idiom which uses physical hurt to describe emotional hurt is (23) *nâa ŋǎaj* 'upturned face.'

(23) *c^{h}ăn t^{h}on tɔ̀ɔpaj mâj dâj ʔìik lɛ́ɛw t^{h}âa k^{h}ăw*
I endure further NEG can anymore already if she
maa wâa c^{h}ăn ʔìik mɛ́ɛtɛ̀ɛ nítdiaw c^{h}ăn càʔ tɔ̀ɔk
come scold me again even if little I will hammer
klàp hâj ***nâa ŋăaj*** *paj lə̄əj*
back cause face upturned DirP:go EMP
'I cannot take it anymore. If she rebukes me one more time, even if it is a slight matter, I will oppose her until she is **humiliated**.'

One consultant used the illustration from boxing to explain why *nâa ŋăaj* came to refer to being humiliated. It is like one is hit in the face with such extreme force that the head is snapped backwards causing the face to turn up. Figure 4 depicts the mapping of (23) *nâa ŋăaj* to its meaning:

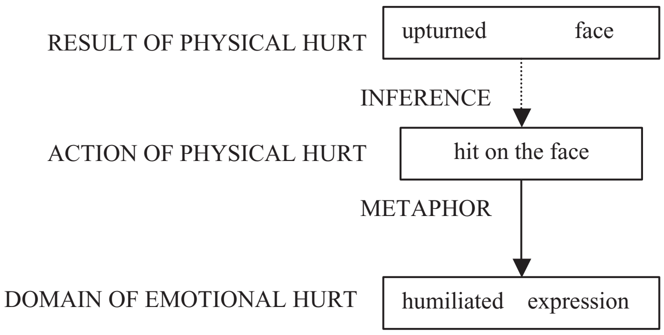


Figure 4. Metaphorical mapping of *nâa ŋăaj*

An additional effect of the feeling of shame is expressed in the use of the adjective *c^{h}aa* 'numb' with *nâa*, as in (24) below.

(24) *c^{h}ăn ʔaaj con* ***nâa c^{h}aa*** *tɔɔnt^{h}îi k^{h}ăw p^{h}ûut tɔ̀ɔ*
I ashamed until face numb when he speak before
nâa fɛɛn c^{h}ăn wâa k^{h}ăw kàp c^{h}ăn k^{h}əəj mii
face boyfriend my that he and I ever has
ʔaraj kan maa kɔ̀ɔn
something together DirP:come before
'My **face was burning with shame** when he spoke in front of my boyfriend that he and I have had a (implicit: sexual) relationship before.'

Another informant explained how (24) *nâa* c^h*aa* 'numb face' is linked to physical hurt. One feels numb in the face when one is slapped so hard that one is stunned. After the initial feeling of the stinging of the face, it will feel numb for a while. Hence the idiom *nâa* c^h*aa* 'numb face.' And, of course, the impact of outright betrayal sends a strong physiological response throughout the entire body. The strength of the onset of this is often felt first in the face.

3.8. Shameless faces

People react in various ways to emotional hurt, real or potential, and Thai 'face' idioms reflect this clearly. In some cases they try to cover up the hurt. In what is probably a reflex of the metaphor TO FEIGN AN EMOTION IS TO STRIKE THE FACE, as illustrated earlier by *tii nâa*, in example (15), examples (25) and (26), for example, designate distinct mental states of a person described in terms of physical states observable in the face.

(25) *naj mɨa* k^h*ăw mâj rák* c^h*ăn lɛ́ʔ bɔ̀ɔk wâa mâj jàak hĕn*
in when he NEG love me and say that NEG want see
nâa c^h*ăn kɔ̂ɔ mâj* ***nâa dâan*** *jùu hâj* k^h*ăw hĕn ʔìik*
face I then NEG face hardened still let him see again
tɔ̀ɔpaj
further
'Since he said that he doesn't love me and doesn't want to see me again, I will not be so **dumb-headed** as to let him see me again.'

(26) t^h*âa* k^h*ăw mâj jɔɔm ráp lûuk naj* t^h*ɔ́ɔŋ* k^h*ɔ̆ɔŋ* c^h*ăn*
if he NEG willing accept child in womb POSS mine
c^h*ăn kɔ̂ɔ* ***nâa năa*** p^h*ɔɔ* t^h*îi càʔ pàawprakàat*
I then face thick enough CONN will announce publicly
hâj t^h*úk* k^h*on rúu rɨaŋ níi* k^h*ɔɔj duu sìʔ*
let every person know matter this wait see EMP
'If he does not accept the child within me, I will be **shameless** enough to let everyone know about this. You wait and see.'

Some people do not feel shame when they should. Noble (1975) explained that a person who is shameless has lost all sense of honor. Being shameless is likened to having a face with skin so thick that one is insensitive to feelings. (25) *nâa dâan* 'hardened face' and (26) *nâa năa* 'thick face' express this phenomenon.

Another way to describe a brazen person is by the use of (27) *nâa sôn tiin* which can be glossed as 'sole of foot face.'

(27) *wan níi pen ŋaj kɔ̂ɔ pen kan c^{h}ăn sûu taaj* ***nâa sôn***
day this be how CONN be EMP I fight die face sole
tiin *jàaŋ kɛɛ tɔ̂ɔŋ cəə kàp c^{h}ăn*
foot like you must meet with me
'Whatever will be today will be. I will fight to the end. To think that I have to meet with a **shameless person** like you!'

It is a biological fact that the thickest skin on the entire human body is that of the sole of one's foot, and this metaphor expresses the conceptualization of that fact. A thick skin is less sensitive than thin skin. In addition, the extreme negative connotation of this metaphor derives from the Thai folk model that attributes honor to the head and depreciates the feet. Finally, the nominal form of the construction reflects the use of *nâa* to designate the person himself/herself. To label someone as *nâa sôn tiin* 'sole of foot face' therefore is a very strong insult. The consultants commented that the use of this phrase with someone entails that the person who utters this phrase does not care for the relationship anymore and that there is little chance for reconciliation.

The opposite of being shameless *nâa dâan* 'hardened face' or *nâa năa* 'thick face' is to be (28) *nâa baaŋ* 'thin face.' This is conventionally construed as indicating shyness or timidity. One who is *nâa baaŋ* 'thin face' is too sensitive and gets easily embarrassed. The metaphor being utilized in (25) to (28) is A SHAMELESS FACE IS A THICK FACE; AN EASILY ASHAMED FACE IS A THIN FACE.

(28) *t^{h}âa k^{h}ɯ̌n jaŋ t^{h}am* ***nâa baaŋ*** *jùu jàaŋ níi t^{h}əə mâj mii*
if insist still make face thin CONT like this you NEG has
t^{h}aaŋ dâj k^{h}ăw maa pen fɛɛn nɛ̂ɛ
way get her come be girlfriend surely
'If you continue to be **too shy** like this, you will never have her as your girlfriend for sure.'

4. A prototypical scenario of shame

The emotion of shame as expressed through many of the Thai 'face' idioms[12] we have just discussed can be seen within a larger framework encompassing a sequence of several phases. This emotion scenario devel-

oped for shame is specific to the Thai culture. A clear implication of all this is that other social groups such as the Chinese or Japanese (who also place a high importance on 'face' and shame), may have a shame scenario that differs in significant ways from that of the Thai.

This scenario describes the normal course of events that take place to bring about shame and the usual reactions of one who experiences shame. There are five stages. They are:

Stage 1: Offending events
Stage 2: Loss of honor
Stage 3: Behavioral reaction
Stage 4: Recovering honor
Stage 5: Preservation of honor

4.1 Stage 1: Offending events

The initial scenario of the Thai folk model of shame involves actions and events that cause one to experience shame. There are two ways in which a person can come to experience embarrassment or humiliation. The first is when an offender does something to that person which causes him or her to feel shame. Some idioms which describe this stage are:

(29) a. *k^hâam nâa* 'to step over the face'
step over face

b. *c^hìik nâa* 'to tear the face'
tear face

c. *hàk nâa* 'to break the face'
break face

d. *mâj wáj nâa* 'not spare the face'
NEG spare face

In the idioms above, the verbs that collocate with *nâa* (to step over, to tear, to break, not to spare) indicate hurtful actions. They reveal a lack of consideration for one's feelings. Another idiom *mâj hâj nâa* 'don't give face' (where face stands for honor) is also used to describe such a situation.

The second way in which one can experience embarrassment or humiliation is when one does something that causes shame to his/her own self. Examples of such actions would be getting caught for cheating or a lady

getting pregnant before she is married. The idioms below express this second way of getting shame.[13]

(30) a. *kʰăaj nâa* 'to sell face'
sell face

b. *kʰăaj nâa wan láʔ hâa bîa* 'to sell face for five coins a day'
sell face day per five coin

c. *sĭa nâa* 'to lose face'
lose face

It is important to note that all the offending events that lead to shame, whether caused by others or by self, require an audience in order for shame to be experienced by a person. Others must be made aware of the events that lead to shame.

4.2. Stage 2: Loss of honor

The consequences of the offending events in Stage 1 results in the loss of honor. The loss of honor or loss of 'face' for the Thai brings about a sense of shame ranging from slight embarrassment to strong humiliation. These are the **emotional** effects of the loss of honor. Nineteen 'face' idioms express these emotional effects. Some of these idioms are:

(31) a. *nâa cʰaa* 'numb face'
face numb

b. *nâa tɛ̀ɛk* 'broken face'
face 'broken

c. *nâa máan* 'withered face'
face withered

d. *nâa ŋăaj* 'upturned face'
face upturned

In addition, Thai 'face' idioms reflect the **physiological** effects of shame such as blushing (as expressed by *nâa dɛɛŋ* 'red face') and agitation (as expressed by *mâj rúu cà ʔaw nâa paj wáj tʰîinăj* 'don't know where to put the face').

It does not always happen that the person experiencing shame will feel that the shame is justified. Sometimes, he or she will feel that the offending event constitutes an injustice and will feel anger as well. At other times, even when the offending event is justified, a person may still get angry because his dignity has been violated. As we have discussed earlier, idioms that describe anger usually draw on the **physiological** effects of anger to stand for the feeling of anger. Some physiological effects of anger and their corresponding 'face' idioms are:

(32) a. *red face* *lɨ̂at* *k*^{h}*ɨ̂n* *nâa*
blood go up face
'blood go up the face'

b. *frowning* *nâa* *nîw* *k*^{h}*íw* *k*^{h}*amuat*
face wrinkled eyebrows entangled
'wrinkled face, entangled eyebrows'

c. *a long face* *c*^{h}*ák* *nâa*
pull face
'to pull face'

Compared with the other stages in this scenario, this stage contains the highest number of idioms. This is, in fact, not surprising as it is at this stage that the emotion of shame is most intense. Other studies (see Ungerer and Schmid 1996) have shown that the majority of metaphors and metonymies expressing emotions describe this stage of the emotion where physiological and behavioral effects are experienced.

4.3. Stage 3: Behavioral reaction

Stage 2 describes the loss of honor and the emotional reactions that are the consequences of shame. Stage 3 is the behavioral reaction to this loss of honor. My data reflect five possible behavioral reactions.

The first is **avoidance**. The person experiencing shame would choose to avoid the others who know about the offending events, hoping that they will forget about the matter eventually. Ukosakul (1994) commented that avoidance is one of the most employed strategies in social interaction and conflict management among the Thai. Some 'face' idioms that aptly depict this strategy of avoidance are:

(33) a. *mɔɔŋ nâa kan mâj tìt* — look face together NEG stick — 'look at the face but cannot stick'

b. *mâj klâa sûu nâa* — NEG dare fight face — 'not dare to fight face'

c. *láp nâa* — conceal face — 'to conceal the face'

d. *lòp nâa* — avoid face — 'to avoid face'

The saying *mɔɔŋ nâa kan mâj tìt* 'look at the face but cannot stick' refers to the situation when two people who have unresolved conflicts avoid each other. The verb *tìt* has numerous senses, such as 'to adhere', 'to append', and 'to connect' (Wit 1977: 534). In all these senses, there is the semantic component of two items coming close together. However, in the case where there is conflict between two parties, as in the situation described in this stage, each party will even avoid looking at each other in the eye.

The idiom *mâj klâa sûu nâa* 'not dare to fight face' makes use of the verb *sûu* 'to fight.' Fighting necessitates confronting. Therefore, *mâj klâa sûu nâa* 'not daring to fight another person' shows an act of avoidance (flight, not fight).

Another behavioral reaction to the sense of shame is to **put on a mask** so that others do not realize that the offending event affected the person as much as it did. To put on a mask is another version of TO FEIGN AN EMOTION IS TO STRIKE THE FACE. The person experiencing shame would keep silent about the situation and not show any sign of being affected by what has happened. Several idioms describe this behavioral reaction. They are:

(34) a. *(sàj) nâa kàak* — put on face shell — 'put on shell face'

b. *tii nâa taaj* — strike face dead — 'to strike a dead face'

c. *nâa c^hə̌j taa c^hə̌j* — face still eye still — 'still face, still eyes'

A third way of dealing with shame would be to use **humor as a diversion**. Even though one may be deeply hurt, one makes light of the matter and laughs it off so that the focus will be diverted from self.[14] The idiom *nâa t^hálen* 'grinning face' can be used to describe someone who turns an embarrassing situation into a funny episode.

The fourth reaction to the loss of honor is the **retribution of anger**.[15] If the experiencer of shame feels that the action of shaming was unjustified, he (or she) would feel angry. Then he would perform an act of retribution, and the wrongdoer would be the target of the act. In Thai, the idiom *tɔ̀ɔk nâa klàp* 'to hammer the face in retaliation' means to 'reproach without sparing the feelings of the other.' When the experiencer *tɔ̀ɔk nâa klàp* 'hammers the face in retaliation', he makes the wrongdoer lose face as well.

If the experiencer of shame is very angry, he may insult the offender with *nâa k^hǒn* 'furry face' or *nâa mǎa* 'dog face' (dogs are considered lowly animals in Thai culture). Sometimes, these derogatory terms are not spoken in front of the wrongdoer but they are used behind the wrongdoer's back with a third party.

The fifth behavioral action is **acceptance**. In this case, the experiencer feels that he deserves what has happened, particularly when he is the one who brought the shame upon himself. So he simply accepts it as his fate. The idiom *kôm nâa* 'bow face' is often paired with the phrase *ráp kam* 'accept fate' to portray this reaction to shame. *kôm nâa ráp kam* means 'to have no choice but to accept the consequences of one's behavior.'

4.4. Stage 4: Recovering honor

At stage 4, the experiencer will do everything possible to remove the felt shame so that honor can be regained. The loss of honor can be compared to being in a state of disequilibrium. The idioms *kûu nâa* 'to redeem face', *kɛ̂ɛ nâa* 'to correct face' and *sɨ́ɨ nâa* 'to buy face' clearly depict this restoring of equilibrium. The verb *kûu* can mean 'to salvage, to restore, to retrieve, or to re-establish' (Wit 1977: 132). In all these terms, there is the idea of a change of status from loss to gain. The verb *kɛ̂ɛ* can mean 'to solve, to mend, to correct, or to save' (Wit 1977). In these definitions, there is the idea of something wrong being corrected. Therefore, the idiom *kɛ̂ɛ nâa* 'to correct face' implies that one's reputation or honor that was wronged is now made right. In the example of the lady who got pregnant before marriage, she could *kɛ̂ɛ nâa* by getting married immediately.

4.5. Stage 5: Preservation of honor

The final stage in the shame scenario occurs when honor is restored. Two things must take place in order for the equilibrium to be restored. First, the shame must be removed and the honor re-established. The idiom that describes this stage is *rāksăa nâa* 'to preserve face.' The verb *ráksăa* 'to preserve' implies to keep something from getting spoiled or to maintain the present condition. Therefore, one who *ráksăa nâa* 'preserves face' will maintain one's reputation.

The second thing that must happen is there must be reconciliation (at least partially) with the offending party (if there is a wrongdoer involved). Recall that if the experiencer feels that he has been unjustly treated, he and the offender will *mɔɔŋ nâa kan mâj tìt* 'look at the face, cannot stick' meaning that the two parties will avoid each other. When that shame is removed and the honor re-established, the two parties can now *mɔɔŋ nâa kan tìt* 'look at the face, can stick' and *hăn nâa k*ʰ*âw hăa kan* 'turn the face toward each other' implying that they have reconciled.

The idioms below describe some ways one can ensure that one's dignity is preserved:

(35)	a.	*rák nâa* love face	'to love face'
	b.	*mii nâa mii taa* have face have eye	'to have face, to have eyes'
	c.	*dâj nâa dâj taa* gain face gain eye	'to gain face, to gain eyes'
	d.	*c*ʰ*ə̂t nâa c*ʰ*uu taa* lift up face lift up eye	'to lift the face up, to lift the eyes up'

The idiom *rák nâa* 'to love face' is used to describe a person who highly values reputation. Whatever one does that is good or right should therefore be done in such a way that others will come to know about it. In this way, one will *dâj nâa dâj taa* 'gain face, gain eyes' and thus receive recognition from others. The aim in all these behaviors is to become someone respected and prominent in society, i.e., someone who *mii nâa mii taa* 'has face, has eyes.' In this way, one will enhance one's good name and the name of one's family as well. The idiom *c*ʰ*ə̂t nâa c*ʰ*uu taa* 'to lift the face up, to lift the eyes up' describes this aspect of gaining honor.[16]

4.6. Deviations from the norm

The scenario described above is by no means the only course that shame can take. There are several deviations from the norm. One deviation which may happen at Stage 2 occurs when a person does not feel shame when he should. When this happens, others will rebuke that person by using these idioms:

(36)	a.	*nâa dâan* face hardened	'hardened face'
	b.	*nâa t^hon jaŋkà ʔìt ronfaj* face enduring like brick fired	'face enduring like fired bricks'
	c.	*nâa nǎa* face thick	'thick face'
	d.	*nâa sôn tiin* face sole foot	'sole of foot face'

These idioms above express shamelessness. In rebuking someone verbally by using these idioms, the speaker hopes to make that person feel rightfully ashamed of what he/she has done.

Another deviation from the norm is the opposite of being shameless, i.e., being embarrassed too easily. To be shameless is to have a 'thick face' *nâa nǎa*. Conversely, someone who gets embarrassed too easily is labeled as possessing a 'thin face' *nâa baaŋ*.

A third deviation which occurs at Stage 5 is being overly concerned about one's honor. When a person is overly concerned about his 'face', others may rebuke this person by asking sarcastically, "*dâj nâa sàk kìi krabuŋ*" 'how many baskets of face can you get?' meaning 'how much recognition can you get?' Others may also label a person who is overtly trying to gain recognition (even at the expense of others) by using the idiom *câw nâa câw taa* 'lord of face, lord of eyes.' Furthermore, someone who goes to extremes just to keep up the appearance of being prominent in society is said to *k^hǎaj p^hâa ʔaw nâa rɔ̂ɔt* 'sell clothes in order to save face.' An example of *k^hǎaj p^hâa ʔaw nâa rɔ̂ɔt* would be to drive a Mercedes even though one can hardly afford a small car.

In all these cases, shame is used as a social sanction here to make a person conform to the norms of the society. Figure 5 depicts diagrammat-

ically the force dynamics involved in these situations using Talmy's (1988) notations. There is a sequence of two phases involved.

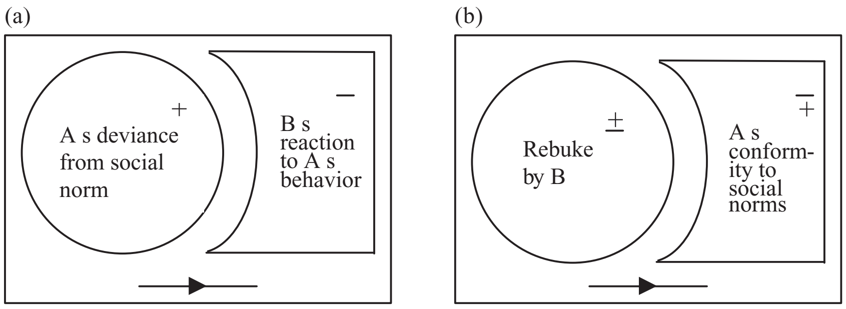


Figure 5. Force dynamics of deviation situations

Figure 5 (a) depicts that a person's (A) deviation from acceptable social behavior (the agonist which is represented by the circle) is strong enough to induce reaction in another (person B) (the antagonist represented by the concave figure) to try to overcome the non-conformity. The line with the arrowhead in the middle represents the result of the action of the force upon a particular entity. In 5 (b), B (now the agonist) then reacts by rebuking A by using the idioms described above in the hope that A will correct his behavior. The plus and minus signs in the right circle indicates that the rebuke may or may not be successful in causing a change of behavior.

The entire conceptual framework for shame can be graphically portrayed in Figure 6.

5. Conclusion

How are face, shame and honor related? Through the numerous 'face' idioms that have to do with honor, we see that honor is metaphorically represented by the face. The opposite of honor is shame. When shame occurs through one 'losing face', honor is lost. Conversely, when honor increases, shame decreases.

The underlying structural metaphor is THE FACE IS THE CONTAINER FOR HONOR. Therefore when the container (the face) is broken (as in *hàk nâa*, for example), the contents (honor) are lost. The source domain is the FACE while the target domain is HONOR. This metaphor has the following ontological correspondences:

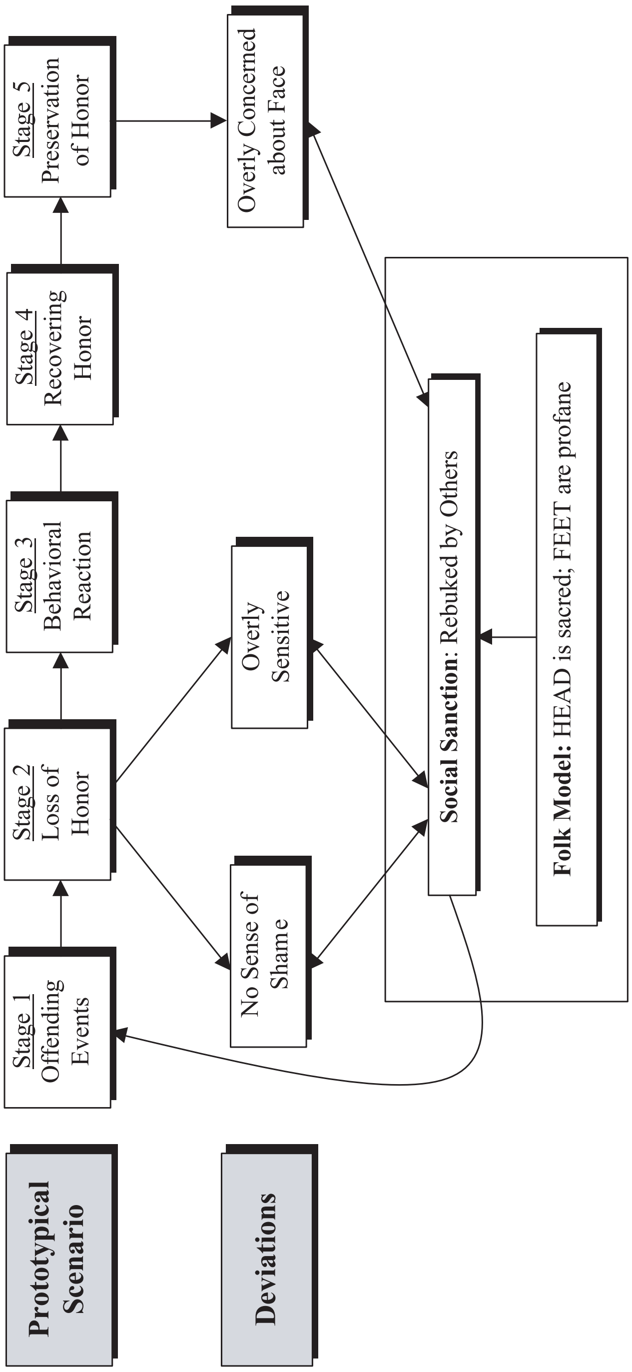


Figure 6. Framework of shame

The container is the face.
The content is honor.
The physical damage to the container is emotional damage to the face.

The restoration of the container is restoration of the face. We can schematize the epistemic correspondences between the face domain and the honor domain as follows:

(a) Source: When the container is damaged or broken, the contents are lost.
Target: When the face is damaged, honor is lost.
(b) Source: The container can be covered up.
Target: The loss of honor (shame) can be covered up.
(c) Source: When the container is repaired, the contents can be replaced.
Target: When the face is restored, honor can be regained.
(d) Source: A container that is made of thick material is not easily damaged.
Target: The face that has a thick skin is not easily hurt.
(e) Source: A container that is made of thin material is easily damaged.
Target: The face that has thin skin is easily hurt.

Studies have shown that for many non-Western cultures, shame plays an important social role (Wierzbicka 1992: 131). Recall that shame always requires an audience just as honor requires recognition by others. Shame is an external sanction which arises from social pressure (Ukosakul 1994). In the Thai society which places much importance on mutual reciprocity and social harmony, shame is one of the social mechanisms that exists for dealing with one another. The large number of 'face' idioms that have to do with honor and shame highlights the salience of this value in the Thai society.

Notes

1. A complete list of all the idioms and a more detailed study can be found in Ukosakul 1999. I wish to thank Gene Casad for his invaluable help and Ron Langacker for his helpful suggestions.
2. The following abbreviations are used in this paper.

CONN	Connective	INTERJ	Interjection
CONT	Continuous	EMP	Emphasis
DIRP	Direction Particle	NEG	Negative

NOM	Nominalizer	POSS	POSSESSIVE
QN	Question	PRT	Particle
PASS	Passive		

3. 'Chest' is used metonymically to mean the 'heart.'
4. The word *nɨa* is a collective term for 'deer.'
5. Not only is *k^hîi* 'excrement' dirty, it is also stinky. This latter characteristic of *k^hîi* is used in a related idiom *mĕn nâa* 'stinky face' which is used to express displeasure with someone.
6. Another idiom which makes use of the verb *hàk* 'to break' to refer to emotional hurt is *hàk laŋ* 'to break the back'. It means 'to double-cross or to betray.'
7. Note that in Thai, one cannot physically *c^hìik nâa* 'tear the face.' *c^hìik* is used for actions such as shredding paper. The physical action of 'tearing the face' would make use of the verb *k^hùan* 'to scratch.' Similarly, the physical action of hitting the face with a hammer would not make use of the verb *tɔ̀ɔk;* rather, the verb *tɔ̀j* 'to punch' is used. In the same way, one cannot physically *hák naa* 'break the face'; but one can physically *t^húp nâa* 'smash the face.'
8. The implicit metaphor (not expressed linguistically) is TO SHAPE THE FACE IS TO FORGE METAL.
9. It is interesting to note that the idiom *hɛ̂ɛŋ hìaw caj* 'dry, withered heart' also means 'depressed or sad.' This idiom makes use of the metaphor THE FACE IS A CONTAINER FOR THE EMOTIONS. This particular metaphor is obviously related to the minor case of the conduit metaphor discussed first by Reddy (1993: 291, 316), and commented on in Lakoff (1987: 104, 108-9, 144, passim).
10. The perceptibility of paleness in reaction to fright is doubtless why such descriptions occur in widely different language groups. Thus, Cora, a Uto-Aztecan language of Northwest Mexico provides the example *a-ka-uh- k^wèiina-hraa* outside-down-REFL-white-PAST 'her face blanched completely white' (E. Casad, personal communication, 11-21-98).
11. While English differentiates between embarrassment and shame, the Thai language uses the word *ʔaaj* to refer to both embarrassment and shame. Thus, for the Thai, embarrassment and shame are at two ends of a spectrum.
12. It is interesting to note that all expressions of shame in Thai always contain the word *nâa*. The only exception found so far is the word *ʔaaj* meaning 'shy' or 'shamed'. Even so, this word can be found in the expression *nâa mâj ʔaaj* literally 'face not ashamed' which is a rebuke for someone who does not feel shame when he/she should.
13. Some of these idioms can be used to describe the situation where others cause shame to oneself as well but they will be passivized. For example, 'he made me lose face' is expressed as *k^hăw t^ham hâj c^hăn k^hăaj nâa* 'he make CAUSE me lose face.'

14. Ukosakul (1994: 217) observed that humor is one means used by the Thai in interpersonal conflicts to distract the attention from the seriousness of a situation.
15. This is similar to one part of the scenario that Kövecses (1986) posits.
16. Several 'face' idioms such as 35 b, c and d occur in doublet form. Informants suggested that the inclusion of the term *taa* 'eye' adds emphasis to the meaning of the idioms. This could be the result of the repetition of the collocation that goes with *nâa* since repetition is used in the Thai language to show emphasis.

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Holistic spatial semantics of Thai

Jordan Zlatev

1. Introduction

A (generic) spatial utterance is an utterance which helps the listener determine the location of a given entity – if the described situation is static – or else the trajectory of its motion. Hence, it can be seen as an explicit or implicit answer to a *where*-question. The following are thus examples of prototypical English spatial utterances: *The toothpaste is on the shelf. He is going to school. She comes from the South. The train will pass through the tunnel.* An approach to spatial semantics that has the utterance (itself embedded in discourse and a background of practices) as its main unit of analysis, rather than the isolated word, may be characterized as *dialogical* (cf. Wold 1992) and more importantly for the present context – *holistic*. Such an approach aims to determine the semantic contribution of each and every element of the spatial utterance in relation to the meaning of the whole utterance – a desideratum for semantics that can be traced back to Frege's (1953 [1884]) "context principle". One major advantage of such an approach to more traditional (cognitive) spatial semantic theories[1] is that by taking its point of departure from the *whole*, rather than from the *parts*, it does not limit the analysis to a particular linguistic form (e.g *over,* cf. Lakoff 1987), form class (e.g. prepositions, cf. Cuyckens 1991), or theoretically biased grammatical notion (e.g. "closed-class elements" cf. Talmy 1988).

The conceptual framework of *situated embodiment* (Zlatev 1997) implies such a dialogical, holistic approach to spatial meaning, resulting in the theory of *holistic spatial semantics* (HSS)*,* which has been applied to a diverse set of languages.[2] In this chapter, after a summary of the theoretical framework in Section 2, I will use this theory to analyze the structure and semantics of spatial utterances in Thai. I will try to show that HSS allows a perspicacious analysis of the complicated semantic and syntactic interdependencies between the members of a number of distinct form classes, exemplified in (1).

(1)	*dəən*	*ʔɔɔk*	*maa*	*càak*	*khâaŋ*	*nay*	*thâm*
	walk	go-out	come	from	side	in	cave
	Manner-V	**Path-V**	**Deictic-V**	**Prep**	**Class-N**	**Region-N**	**LM-N**

‘He/she is coming out (walking) from inside the cave.’

The word classes and their designations, shown in boldface below the glosses, are themselves a product of the analysis, and are defined on the basis of *both* semantic and syntactic criteria, as described in Section 3. Because of the wide empirical scope, however, I will of necessity be quite schematic with respect to the meaning of the individual lexical items. In conclusion, I will consider some theoretical implications of the study for linguistic typology and semantic theory.

2. Theoretical framework

2.1. Situated embodiment

The conceptual framework of *situated embodiment* (cf. Zlatev 1997, in press), incorporates the principle of *embodiment* (cf. Johnson 1987) emphasized within cognitive semantics, but complementing it with Wittgenstein’s (1953) view of language as “forms of life” embedded, or *situated,* within socio-cultural practices. The major descriptive category is that of a *minimal, differentiated language game* (MDLG). An MDLG is *minimal* since it involves only a single utterance, which constitutes the minimal “move” in discourse and may be regarded as a minimal independently meaningful unit of language; it is *differentiated* because neither

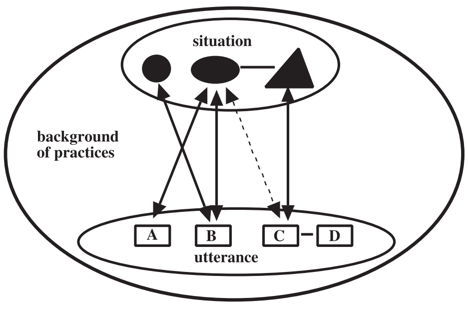


Figure 1. A schematic illustration of a *minimal, differential language game* (MDLG) and holistic spatial semantics (cf. text).

utterance nor situation are monolithic, but rather divided into categories of elements; it is a *language game*, since the utterance and the situation are interwoven as aspects of a given linguistic practice (e. g. asking for directions), where language is not simply "a picture of reality". Figure 1 represents the notion of MDLG schematically.

As in *cognitive grammar* (cf. Langacker 1987), this view implies that linguistic knowledge may be characterized as a mapping between a "phonological pole" and a "semantic pole". However, the semantic pole is not thought of as an individual speaker's conceptualization, but rather as an intersubjectively construed *situation.*[3] Situations can be partially analyzed into semantic categories, which are are primed by language-*independent*, sensorimotor categories, but are shaped throughout acquisition into language-*specific* ones (cf. Bowerman 1996). Thus a balance between semantic universalism and particularism is to be anticipated. Furthermore, these categories are assumed not to be independent of each other, but to form aspects of meaningful wholes, in the manner of *frame semantics*, e. g. Fillmore (1982). The utterance itself can be analyzed into separate words and morphemes, falling into form classes that emerge as a result of semantic and distributional regularities. But since there are also suprasegmental and collocational structures (cf. Pawley and Syder 1983) which span over the individual units, analyzability on the utterance level, as on the situation level, is only partial.

The mapping between the semantic categories and the utterance units is not at all constrained to be one-to-one, but rather expected to be *many-to-many*. Talmy's (1985) notion of *lexicalization patterns* focuses on the mapping of more than one semantic unit to a single lexical item (conflation), while the phenomenon of *distributed spatial semantics* analyzed by Sinha and Kuteva (1995) highlights the reversed relationship (one semantic unit – several utterance units). Such cases are expected to be the rule rather than the exception from the standpoint of the proposed framework.

Finally and importantly, the meaning of an utterance is fixed only relative to an assumed background, as pointed out by, for example, Dreyfus (1991, 1993) who calls it a "background of shared practices" and Searle (1983, 1992) who refers to it as "human capacities (abilities to engage in certain practices, know-how, ways of doing things etc.)" (Searle 1992: 179). This is the conception of the background "represented" in Figure 1 by the fact that the smaller utterance and situation ovals – gestalt-like in themselves – presuppose the larger oval of background practices.

2.2. Holistic spatial semantics (HSS)

Holistic spatial semantics (HSS) may be considered a theory of the linguistic expression of spatial meaning that stems from the conceptual framework of situated embodiment outlined above. It proposes that there exist 7 universal spatial semantic categories: **Trajector**, **Landmark**, **Motion**, **Frame of Reference**, **Region**, **Path** and **Direction**.

2.2.1. Trajector (TR)

The entity (object, person or event) whose location or motion is of relevance. Similar uses of the term can be found in Langacker (1987), Lakoff (1987) and Regier (1996). Other terms referring to this category include *Figure* (Talmy 1975, 1983), Levinson (1996) and *Referent* (Miller and Johnson-Laird 1976), Levelt (1996).

2.2.2. Landmark (LM)

The reference entity in relation to which the location or motion of the Trajector is determined (Langacker 1987, Lakoff 1987, Regier 1996). Other terms include *Ground* (Talmy 1975, 1983), Levinson (1996), *Relatum* (Miller and Johnson-Laird 1976), Levelt (1996). (It should be noted that Langacker extends the meaning of the terms "trajector" and "landmark" outside the spatial domain).

2.2.3. Motion

A binary category indicating whether there is perceived motion or not. In most cases of so-called "virtual motion" (Talmy 1983), "abstract motion" Langacker (1987), and "fictive motion" (Talmy 1996) the value of this category is negative, while the value of Path is different from ZERO (see below).

2.2.3. Frame of Reference (FoR)

The spatial disposition of the Trajector is also determined by situating it within a Frame of Reference (FoR) requiring one or more fixed **Bearings**, as well as **Axes** projecting from them**.** These can be defined (a) with respect to the Landmark in which case the frame is ALLOCENTRIC, (b) geocardinal positions, in which case the frame is GEOCENTRIC, or (c) according to a viewpoint, in which case the frame is DEICTIC. This division is a generalization of the Intrinsic/Absolute/Relative division proposed by

Levinson (1996) and Pedersen et al. (1998) which applies only to static projective relations on the horizontal plane.

While almost all theories of spatial semantics acknowledge the importance of the category FoR, no two define it in the same way. Levelt (1996) uses the term *Pespective System* in a way similar to Levinson. Jackendoff (1996) distinguishes 8 different FoRs, by rather arbitrary criteria. Langacker (1987) subsumes FoR under his notion of *Domain,* but this fails to do justice to the special character of the category. Zlatev (1997) uses the same terms as the present account, but confounds FoR and Landmark type, while the present account is in accord with Levinson (1996), who points out that "[l]inguistic frames of reference cannot be defined with respect to the origin of the co-ordinate system" (ibid: 135). For example, (2 a–b) both employ a DEICTIC FoR despite different kinds of origins, while (3 a–b) use two different FoRs despite that in both cases the origin of the FoR is in the speaker.

(2) a. *He is standing in front of the tree.*
FoR: DEICTIC
b. *He is standing in front of the tree from John's point of view.*
FoR: DEICTIC

(3) a. *Stand behind the tree.*
FoR: DEICTIC
b. *Stand behind me.*
FoR: ALLOCENTRIC

2.2.5. Region

The category denotes a region of space always defined in relation to a Landmark. By specifying a value to the category Region (and a FoR), the Trajector is related not just in terms of vague proximity (though that is also possible), but is being located more specifically with respect to the Landmark's INTERIOR, EXTERIOR, LATERAL, SUPERIOR, INFERIOR, ANTERIOR, POSTERIOR and other similar regions. Svorou (1994) uses the notion Region in a similar way. Languages can differ substantially both on the extension of the regions which they express, and on whether they are defined on the basis of primarily functional or primarily perceptual properties of the landmark.

2.2.6. Path

The most schematic characterization of the trajectory of actual or virtual motion in relation to a Region defined by the Landmark in terms of the

components BEGINNING, MIDDLE and END, similar to the distinction Source/Medium/Goal (Slobin 1997). This notion is *different* from the notion of Path used by e. g. Talmy (1983) and Lakoff (1987) which is much more "imagistic". Furthermore by including ZERO (no extension) among the values of Path, generalizations concerning e. g. locative case systems can be captured. HSS thus abstracts Path from Region and allows stating the fact that the spatial meaning of the Bulgarian sentences (4 a–c) is identical apart from the value of the category Path. (The English translations also differ in terms of FoR, since (4 a) and (4 c), but not (4 b) employ the DEICTIC frame in addition to the ALLOCENTRIC frame.)

(4) a. *Toj iz-leze ot stajata.*
He out-move+PAST from room+DEF
'He came out from the room.'
Region: INTERIOR – Path: BEGINNING

b. *Toj mina prez stajata.*
He pass+PAST through room+DEF
'He passed through the room.'
Region: INTERIOR – Path: MIDDLE

c. *Toj v-leze v stajata.*
He in-move+PAST in room+DEF
'He went into the room'.
Region: INTERIOR – Path: END

2.2.7. Direction

When the trajectory of motion is not characterized in terms of its relation to the Region of a Landmark, it can be defined in terms of its Direction along the Axes provided by the different Frames of Reference (5 a–b).

(5) a. *He went that way.*
FoR: DEICTIC, Direction: DISTAL

b. *The balloon is going up.*
FoR: GEOCENTRIC, Direction: UPWARD

Following *situated embodiment*, HSS assumes that these semantic categories have their *basis* in categories of sensorimotor experience, but are not sensorimotor themselves: The latter are perceptually rich and language-independent while the semantic ones are schematic and language-

dependent. This becomes obvious from the fact that the exact values of the category Region may vary considerably across languages. Languages also differ in the way the categories are expressed, though always through some combination of *overt expression, covert expression* and *background specification*.

2.3 Overt expression

A semantic category is expressed overtly only if its values vary systematically with different expressions from a particular form class. There are three general patterns of overt expression: *conflation,* when more than one semantic category is expressed by the members of a single form-class; *distributedness,* when the same category is expressed by a set of different form classes, and *complementarity,* when different form-classes typically express different categories. The Japanese example (6) illustrates all three patterns:

- conflation Path-V (*deru*) ↔ Path + Region
- distributedness Path-V (*deru*) + Post (*ni*) ↔ Path
- complementarity Region-N (*soto*) ↔ Region, Post (*ni*) ↔ Path

(6)	*sensei*	*ga*	*dojo*	*no*	*soto*	*ni*
	teacher	SUBJ	dojo	GEN	outside	to
					Region: EXTERIOR	Path: END

deta
go+PAST
Path: BEGIN − Region: INTERIOR
Path: END − Region: EXTERIOR

'The karate instructor left the dojo and went out.'

According to the present analysis the meaning of Path-expressing verbs such as *deru* is assumed to include (at least) two sets of Path-Region values, where the one underlined is thematized, or "foregrounded" according to Talmy's (1997) theory of "the windowing of attention".

2.4 Covert expression

Covert expression implies that a word that primarily expresses one semantic category, participates in the expression of another. For example,

the semantic category Region is usually not expressed by English verbs overtly – verbs of locomotion (e. g. *go, run, fly, float*) will typically express the category Manner-of-motion, rather than information pertaining to the Path and/or Region of the motion event. However, the use of particular verbs will constrain the value of Region, as shown by the contrast between (7 a) and (7 b) below. This covert expression of Region by certain verbs in English (the broken line between [C] and the ellipse in Figure 1) may be seen as an effect of the holistic relationship between concepts within situations.

(7) a. *John flew over the bridge*.
Region: SUPERIOR

b. *John walked over the bridge*.
Region: SURFACE

2.5 Background specification

Background specification is involved in the Japanese example (6), albeit not in the domain of spatial semantics. Consider the translation of *sensei* ('teacher') as 'karate instructor' – it is the word *dojo* ('dojo', 'place for practicing karate') which strongly predisposes for a "karate training" background context, which constrains the interpretation of *sensei.* This also shows that covert expression and background specification are closely related, and it may not be determinate whether a word co-expresses a certain category or "triggers" a more general context for its interpretation. On the other hand, both may be said to correspond to *pragmatic,* as opposed to semantic, meaning (cf. Levinson 1983). Thus HSS maintains a weak form of the distinction between *semantics* and *pragmatics*.

In the following two sections – corresponding to overt and covert/background expression – a large class of Thai spatial utterances will be described according to the theoretical framework here summarized. The major restriction will be that I will deal only with cases where the Trajector is identical with the grammatical subject, hence excluding transitive verb constructions. I will also ignore the category Aspect, though it is clearly relevant for the semantics of motion event expressions, as reflected in terminological distinctions such as "perfective path" vs. "imperfective path" (Hawkins 1993).

3. Overt expression of spatial meaning in Thai

Thai possesses a rich and complex system for expressing spatial meaning. In terms of overt expression, at least *six different form classes* may be defined on the basis of semantic and distributional (structural) criteria: *path verbs* (**Path-V**), *direction verbs* (**Dir-V**), *deictic verbs* (**Deictic-V**), *prepositions* (**Prep**), *region nouns* (**Region-N**), and *class nouns* (**Class-N**). In the present section I will illustrate and define semantically and structurally each one of these 6 classes.

3.1. Path verbs

Thai has a number of verbs which primarily express the category Path and thus appear to place Thai in the "verb-framing" type of languages, according to Talmy's well-known typological distinction (Talmy 1985), along with e. g. Romance, Korean and Japanese (Wienold 1995). A non-exhaustive list of these verbs includes: *khâw* ('enter'), *ʔɔ̀ɔk* ('exit'), *ləəy* ('go-beyond'), *klàp* ('return'), *phàan* ('pass') and *khâam* ('cross'). Examples (8)−(13) show each one of these verbs in the context of a spatial utterance where they appear as main verbs, with an optional preceding progressive marker (PROG) *kamlaŋ*, and an obligatory Landmark nominal at the end. Between the path verb and the LM-NP it is sometimes possible to interpose a deictic verb (cf. 3.3) as shown by the "b" examples, but at least in (8 b), (10 b), (12 b) and (13 b) this is clearly problematic, and according to some (though not all) native speakers ungrammatical.[4] Below each example is given a partial analysis of the meaning of the verbs in terms of the categories Path and Region (which is, recall, specified in relation to the Landmark).

(8) a. *chăn (kamlaŋ)* ***khâw*** *hɔ̂ɔŋ*
I PROG enter room

b. *??chăn (kamlaŋ)* ***khâw*** *pay hɔ̂ɔŋ*
I PROG enter go room
'I am going into the room.'
Path: BEGIN −Region: EXTERIOR, <u>Path: END − Region: INTERIOR</u>

(9) a. *chăn (kamlaŋ)* ***ʔɔ̀ɔk*** *càak/*0 hɔ̂ɔŋ*
I PROG exit from room

b. *chăn (kamlaŋ)* ***ʔɔ̀ɔk*** *pay càak/*0 hɔ̂ɔŋ*
I PROG exit go from room
'I am going out from the room.'
Path: BEGIN−Region: INTERIOR, Path: END − Region: EXTERIOR

(10) a. *khăw (kamlaŋ)* ***ləəy*** *pâay*
he/she PROG go-beyond bus-stop

b. *??khăw (kamlaŋ)* ***ləəy*** *pay pâay*
he/she PROG go-beyond go bus-stop
'He/she is passing the bus-stop.'
Path: BEGIN − Region: DISTAL, Path: MIDDLE − Region: PROXIMATE, Path: END − Region: ULTERIOR

(11) a. *khăw (kamlaŋ)* ***klàp*** *bâan*
he/she PROG return home

b. *khăw (kamlaŋ)* ***klàp*** *pay bâan*
he/she PROG return go home
'He/she is returning home.'
Path: BEGIN − Region: LM, Path: MIDDLE − Region: DISTAL
Path: END − Region: LM

(12) a. *khăw (kamlaŋ)* ***phàan*** *(nay) sŭan*
he/she PROG go-through/pass inside park

b. *??khăw (kamlaŋ)* ***phàan*** *pay (nay) sŭan*
he/she PROG go-through/pass go inside park
'He/she is going through the park.'
Path: BEGIN − Region: EXTERIOR, Path: MIDDLE − Region: INTERIOR/LATERAL, Path: END − Region: EXTERIOR

(13) a. *khăw (kamlaŋ)* ***khâam*** *thanŏn*
he/she PROG cross road

b. *??khăw (kamlaŋ)* ***khâam*** *pay thanŏn*
he/she PROG cross go road
'He/she is crossing the road.'
Path: BEGIN − Region: SIDE-A, Path: MIDDLE − Region: INTERIOR/SURFACE, Path: END − Region: SIDE-B

The semantic difference between *khâw* and *ʔɔ̀ɔk* in (8) and (9) is captured by stating that the verbs have converse Region values associated with the

BEGINNING and END values for Path. But since *ʔɔ̀ɔk* foregrounds the values Path: END–Region: EXTERIOR, without the preposition *càak* ('from') (cf. 3.4) there would be a clash with the default region of the LM-NP *hɔ̂ɔŋ* ('room'): INTERIOR – resulting in ungrammaticality. (A more detailed analysis of semantic constraints is deferred for Section 5.)

The remaining 4 path verbs *ləəy*, *klàp*, *phàan* and *khâam* require the MIDDLE value of Path to be taken in consideration as well, where for the last two, it is the foregrounded value. Interestingly, *phàan* has a value for Region which appears "ambiguous" from an English perspective: *phàan sǔan* could either mean 'pass <u>through</u> the park' or 'pass <u>by</u> the park' while adding the region noun *nay* ('inside') (cf. 3.5) singles out the first interpretation. The case is rather similar with *khâam,* but this seems less strange from an English perspective, since *cross* has a similar semantic vagueness: *khâam mɛ́ɛnâam* means 'cross the river', and the action can be performed either on the surface (by boat), through its "interior" (by swimming), or walking over it on a bridge. What is important (unlike with *phàan*) is that the path begins on *one side* of the Landmark and ends on the other, implying that the Landmark must be an entity that can be seen as having different sides.

Apart from Path and Region, the ability of path verbs to express an ongoing activity when combined with the progressive marker indicates that they also express the category Motion. According to the analyses presented by Kita (1999) and Choi and Bowerman (1991) this is not the case for corresponding verbs in Japanese, e. g. *hairu* ('enter') and *deru* ('exit') and Korean, which simply express change of location when not combined with deictics. If this is indeed the case (the analyses are controversial) this would be captured in the present theory by stating that Japanese and Korean verbs express overtly only Path and Region, though not Motion. For Thai, however, there is no clear evidence for such an analysis.

We also need to consider whether Thai path verbs express the category Frame of Reference. Utilizing the distinctions made available within HSS, I would propose the hypothesis that path verbs in Thai *do not express FoR overtly*, in contrast to their counterparts in e. g. English. The evidence for this is the following: As mentioned, the Landmark noun needs to be explicitly stated (when the verb complex consists only of a path verb), while this is not the case for the English translations, as shown in (14):

(14) *??khăw (kamlaŋ) khâw/ʔɔ̀ɔk/ləəy/klàp/phàan/khâam*
he/she PROG enter/exit/go-beyond/return/pass/cross
'He/she is entering/exiting/going beyond/returning/passing through/crossing'.

However, this changes if the path verb is either followed by a deictic verb as in (15 a), or preceded with a "manner verb" expressing the manner in which the motion is carried out as in (15 b), or both as in (15 c). In these cases it is not necessary to spell out the Landmark, which may remain implicit.

(15) a. *chăn (kamlaŋ) khâw pay*
I PROG enter go
'I am going in (there).'

b. *chăn (kamlaŋ) dəən khâw*
I PROG walk enter
'I am walking in.'

c. *chăn (kamlaŋ) dəən khâw pay*
I PROG walk enter go
'I am going in (there, walking).'

What could this difference – between path verbs as single verbs and when they appear following manner verbs – be attributed to? Focusing on *khâw* and *ʔɔ̀ɔk* (and similar verbs in Khmer) Sak-Humphry, Indambraya and Starosta (1997) argue that since the two sets have somewhat different distributional properties, they should be analyzed as "homophonous" forms, belonging to two different categories – verbs and "deverbial adverbs", respectively. However, their analysis does not make it clear what type of semantic difference, if any, would correspond to the distributional difference, making the separation into two classes less than convincing.

According to the present analysis, the semantic difference between the two sets of "homophonous" verbs lies in the fact that the post-manner path verbs express a value for the category Frame of Reference (ALLOCENTRIC), but the single verbs do not. We may avoid postulating two different categories of homophonous forms, if we assume a possibility suggested by HSS: Even though neither the path verbs nor the manner verbs express FoR independently from each other, they do so in combination – a form of (covert) distributedness.

Finally, either with or without a preceding manner verb, path verbs can take not only a "bare" Landmark nominal, but one preceded by a preposition as in (9), a region noun as in (12), or with both, as in (1). Using the notation suggested in Section 2 for the semantics, and a construction grammar-like (cf. Goldberg 1995) scheme for the syntax, with parentheses indicating optionality and '/' indicating disjunction, the category path verb (Path-V) can be defined as in (16).

(16) a. Path-V ↔ Path + Region + Motion
[TR-NP (PROG) _ Deictic-V/LM-NP/Deictic-V (Prep) LM-NP]

b. Path-V ↔ Path + Region + Motion + FoR: ALLOCENTRIC
[TR-NP (PROG) Manner-V _ 0/Deictic-V/LM-NP/
Deictic-V (Prep) LM-NP]

3.2. Direction verbs

The next category of Thai spatial expressions includes the verbs *khɨ̂n* ('go-up'), *loŋ* ('go-down') and *thɔ̌ɔy* ('go-back'). These verbs are similar syntactically and semantically to the path verbs described above, but certain differences motivate their separation into a separate form class. First, the expressions with *khɨ̂n* (17 a) and *loŋ* (18 a) are better than those with path verbs without either a following deictic verb or a LM-NP, while *thɔ̌ɔy* (19 a) is entirely grammatical in this context. On the other hand, neither of the verbs is completely felicitous with a following LM-NP, *thɔ̌ɔy* being ungrammatical (17 b, 18 b, 19 b). Finally the combination direction verb + deictic verb + LM-NP is less subject to constraints than was the case with the path verbs (17 c, 18 c, 19 c).

(17) a. *?khǎw (kamlaŋ)* ***khɨ̂n***
b. *??khǎw (kamlaŋ)* ***khɨ̂n*** *chǎn sɔ̌ɔŋ*
c. *khǎw (kamlaŋ)* ***khɨ̂n*** *pay chǎn sɔ̌ɔŋ*
he/she PROG go-up go second floor
'He/she is going up (to the second floor).'
FoR: GEOCENTRIC, Direction: UPWARD

(18) a. *?khǎw (kamlaŋ)* ***loŋ***
b. *??khǎw (kamlaŋ)* ***loŋ*** *chǎn sɔ̌ɔŋ*
c. *khǎw (kamlaŋ)* ***loŋ*** *pay chǎn sɔ̌ɔŋ*

he/she PROG go-down go second floor
'He/she is going down (to the second floor).'
FoR: GEOCENTRIC, Direction: DOWNWARD

(19) a. *khǎw (kamlaŋ)* ***thɔ̆ɔy***
b. **khǎw (kamlaŋ)* ***thɔ̆ɔy*** *pratuu*
c. *??khǎw (kamlaŋ)* ***thɔ̆ɔy*** *pay pratuu*
he/she PROG go-back go door
'He/she is going (to the back).'
FoR: ALLOCENTRIC, Direction: BACKWARD

The semantic difference between path and direction verbs may be summarized as follows. While the trajectory of motion expressed by the path verbs is determined via the categories Path and Region − which always need to be anchored in a Landmark − direction verbs express the trajectory through the bearings and axes of the particular Frame of Reference, which can be either GEOCENTRIC as in (17) and (18) or ALLOCENTRIC as in (19). The category may be defined more formally as in (20).

(20) Dir-V ↔ Direction + Motion + FoR: GEO/ALLOCENTRIC
[TR-NP (PROG) (Manner-V) __ 0/Deictic-V/Deictic-V (Prep) LM-NP]

3.3. Deictic verbs

As seen in most of the previous examples, the deictic verbs *pay* ('go') and *maa* ('come') can occur (if there are no constraints) as *the last verb* in the verb complexes, following the manner verb (if any) and path verb, in that order. But as shown in (21) and (22) they can also occur as the only verb in the sentence. Apart from the familiar by now optional progressive marker, the two examples below show that *pay* and *maa* can be followed by an optional preposition, (which is what *thɨ̆ŋ* is in this context, cf. 3.4) and an optional LM-NP.

(21) a. *khǎw (kamlaŋ)* ***pay***
b. *khǎw (kamlaŋ)* ***pay*** *chieŋmày*
c. *khǎw (kamlaŋ)* ***pay*** *thǔŋ chieŋmày*
he/she PROG go to Chiang Mai
'He is going (to Chiang Mai).'
FoR: DEICTIC, Direction: DISTAL

(22)

a.	*khǎw*	*(kamlaŋ)*	***ma***		
b.	*khǎw*	*(kamlaŋ)*	***ma***		*chieŋmày*
c.	*khǎw*	*(kamlaŋ)*	***ma***	*thʉ̌ŋ*	*chieŋmày*
	he/she	PROG	go	to	Chiang Mai

'He is coming (to Chiang Mai)'.
FoR: DEICTIC, Direction: PROXIMAL

The main meaning of these verbs (either when they occur alone or in combination with path and manner verbs) is motion away or towards the *deictic center*. This meaning is captured in the present theory through the categories Direction, Motion and FoR: DEICTIC. But what functions as a deictic center? As in most languages, in Thai the major deictic center may be identified with the speaker of the utterance. But as is well known (e. g. Fillmore 1966) the situation is not so simple, and in many cases the deictic center can be the addressee, or the location of the speaker or addressee in the situation of reference (rather than the current context). Is Thai an exception to this possibility for the deictic center not to coincide with the speaker at the moment of utterance? This seems to be the received view and is, for example, claimed by Rangkupan (1992) who defines the meaning of the verbs not in relation to a deictic center, but directly with respect to speaker: "*pay* 'go' denotes the movement away from the speaker's location while, … *maa* 'come' denotes the movement toward the speaker's location" (ibid: 1). Rangkupan also states that "when the speaker is the moving thing himself … he is obliged to use *pay*" (ibid: 50) – since of necessity he is moving away from his present location. However, this does not seem to be true, at least for colloquial Thai. As in English, the speaker may choose to use *maa* instead of *pay* when he (or a third party) moves in the direction of the addressee – thereby rendering the addressee as the deictic center, as in (23). It should be noted that this formulation implies a higher degree of intimacy between speaker and addressee, than if the speaker had used *pay*.

(23)

chǎn/khǎw	*jà*	*maa*	*thîi*	*bâan*	*thəə*	*pruŋnîi*
I/he	FUT	come	at	house	you (INTIM)	tomorrow

'I/he will come to your house tomorrow.'

One more complication needs to be commented upon. When the deictic verbs are followed by a LM-NP, as in (21 b) and (22 b), apart from specifying the trajectory in relation to the deictic center, there is also an implication that the trajectory is to end at a Region that is co-extensive with

the Landmark, i. e. Path: END-Region: LM. This would help explain the unacceptability of examples (10 b), (12 b) and (13 b), where *pay* occurs with a path verb focusing on a Region *which is not identical with the Landmark*. Summary of this double distributional and semantic pattern for the deictic verbs is presented in (24). It is possible that those Thai speakers who do accept sentences such as (10 b) are willing to interpret them in terms of (24 a), i. e. to neglect the Path: END – Region: END component.

(24) a. Deictic-V ↔ Direction + Motion + FoR: DEICTIC
[TR-NP (PROG) (Manner-V) (Path-V/Dir-V) __ (Prep LM-NP)]

b. Deictic-V ↔ Direction + Motion + FoR: DEI + Path: END-Region: LM
[TR-NP (PROG) (Manner-V) (Path-V/Dir-V) __ LM-NP]

3.4. Prepositions

The category of prepositions in Thai is controversial since most of the forms that could be classed as prepositions may also be categorized otherwise. This should not be a problem, however, if a class with coherent semantic and distributional properties can be identified. I would argue that the forms appearing in boldface in example (25)–(32) constitute such a class. Beginning this time with the semantics, *càak* ('from'), *taam* ('along'), *thɨ̌ŋ* ('to') and *khɛ̂ɛ* ('no-further-than') express Path and Region, and *thaaŋ* ('toward') expresses Direction.

(25) *khǎw (kamlaŋ) maa* ***càak*** *bâan*
he/she PROG come from home
'He/she is coming from home.'
Path: BEGIN – Region: INTERIOR
Path: END – Region: EXTERIOR

(26) *rót (kamlaŋ) pay* ***taam*** *thanǒn*
car PROG go along road
'The car is going along the road.'
Path: MIDDLE – Region: ALONGSIDE

(27) *rót (kamlaŋ) pay* ***thɨ̌ŋ*** *waŋ*
car PROG go to palace

'The car is going up to the palace.'
Path: BEGIN – Region: DISTAL
Path: END – Region: CONTACT

(28) *khǎw (kamlaŋ) maa* ***thaaŋ*** *pratuu*
he/she PROG come toward door
'He is coming toward the door.'
FoR: DEICTIC/ALLOCENTRIC, Direction: TOWARD

(29) *rót (*kamlaŋ) pay* ***khɛ̂ɛ*** *waŋ*
car PROG go until palace
'The car goes (only) up to the palace.'
Path: BEGIN – Region: DISTAL
Path: END – Region: CONTACT

Unlike the path and direction verbs, however, these prepositions do not express the category Motion. In examples (25)–(28) the fact that there is motion involved is rather expressed by the deictic verb *pay.* Example (29), however, is impossible with a progressive marker, showing that there is no real motion in the scene; the sentence rather states the fact that the Trajector will not proceed further than the Landmark. This implication of "less than expected" is part of the semantics of *khɛ̂ɛ,* distinguishing it from *thǔŋ* in other than purely spatial terms (cf. 27).

Since the category Path, as defined in the present theory, is independent from the category Motion, the prepositions *troŋ* ('exactly-at'), *thîi* ('at') and *thɛ̂ɛ* ('near') can be shown to have the same kind of semantics as the others which express Path and Region, though with a ZERO value for Path. The fact that the situations described in (30)–(32) are static is expressed by the main verbs: *yùu* ('exist'), *khɔɔy* ('wait') and *mii* ('have', 'exist').

(30) *man yùu* ***troŋ*** *nîi*
it exist exactly-at here
'It is right here.'
Path: ZERO – Region: CLOSE PROXIMAL

(31) *khǎw khɔɔy yùu* ***thîi*** *nâa bâan*
he/she wait IMPERF at front house
'He is waiting in front of the house.'
Path: ZERO – Region: PROXIMAL

(32) *mii yəʔ* ***thɛ̌ɛw*** *bâan chǎn*
have many near house I
'There are many of them in my neighborhood.'
Path: ZERO – Region: LOOSE PROXIMAL

Structurally, prepositions in Thai can be identified by the double criterion that they must occur prior to the LM-NP (by definition) and be preceded by the last verb of the *verb complex*. As seen earlier, in spatial utterances this complex always comes in the order manner-V + path-V + deictic-V, where one or two of the classes may be missing. If all three are "missing" however, then what could be classed as a "preposition" according to the first criterion, can not be a preposition but must rather be a verb. Thus *thiŋ* ('reach') and *càak* ('leave') are path verbs in (33) and (34), and the fact that they have more specific meanings than the "homophonous" prepositions is consistent with the predictions of gramaticalization theory (cf. Hopper and Traugott 1993).

(33) *khǎw* ***thɨ̌ŋ*** *chieŋmày*
he/she reach Chiang Mai
'He reached Chiang Mai.'

(34) *chǎn* ***càak*** *khrɔ̂ɔpkhrua mɯ̂ɯa pii kɔ̀ɔn*
I leave family when year before
'I left my family last year.'

To summarize, as represented in (35), spatial prepositions in Thai express a value for Path and Region (with the exception of *thaaŋ* which expresses Direction) like the path verbs, but unlike them, a value for FoR (ALLOCENTRIC) and no value for Motion. Their (basic) position is after the last verb of the verb complex, and before the Landmark NP, which may include a Region noun as we will see below.

(35) Prep ↔ Path + Region + FoR: ALLOCENTRIC
[(TR-NP) (Manner-V) (Path-V/Dir-V) (Deictic-V)* __ LM-NP]
* at least one verb from the Verb complex

3.5. Region nouns

The type of expressions that I here refer to as *region nouns* have rather indeterminate grammatical status. In Thai (and in typologically similar

languages) such expressions have been called "prepositions" (Noss 1964), "locative nouns" (Sinha et al 1994), "relator nouns" (Indrambarya 1995), "relational nouns" (Wienold 1995), even the labels implying that they have both noun-like and adposition-like syntactic and semantic properties. The relevant forms in Thai are displayed in the leftmost column in Table 1.

Table 1. The most common region nouns, with glosses, one of their typical contexts of use, and their meanings in terms of the categories Region and FoR. The latter is on some occasions a combination of 2 values (X+Y) and on others is ambiguous between 2 values (X/Y).

Region-N	Gloss	Translation of example (36 a)	Overt expression
nay	inside	'It is inside.'	Region: INTERIOR, FoR: ALLO
nɔ̂ɔk	outside	'It is outside.'	Region: EXTERIOR, FoR: ALLO
bon	top	'It is on the top' (upstairs).	Region: SUPERIOR + CONTACT FoR: GEO + ALLOCENTRIC
lâaŋ	bottom	'It is at the bottom' (downstairs).	Region: INFERIOR FoR: GEO + ALLOCENTRIC
sáay	left	'is on the left side.'	Region: LEFT FoR: ALLOCENTRIC/DEICTICk
khwǎa	right	'It is on the right side.'	Region: right FoR: ALLOCENTRIC/DEICTIC
nâa	front	'It is at the front.'	Region: FRONT FoR: ALLOCENTRIC/DEICTIC
lǎŋ	back	'It is at the back.'	Region: BACK FoR: ALLOCENTRIC/DEICTIC
nɨ̌a	above	'It is above.'	Region: SUPERIOR FoR: GEO + ALLOCENTRIC
tâay	below	'It is below.'	Region: INFERIOR FoR: GEO + ALLOCENTRIC
khâaŋ	beside	'It is beside.'	Region: LATERAL FoR: ALLOCENTRIC
klaaŋ	middle	'It is in the middle.'	Region: MIDDLE FoR: ALLOCENTRIC

My choice of label for this class is dictated by the following considerations. Semantically, especially when they appear after the class noun *khâaŋ* ('side') as in (36 a) and (36 b), but also when they are "bare" and precede a Landmark nominal as in (36 c), they express the category Re-

gion and one or more values for FoR. As can be seen in the translations in the third column of Table 1, after *khâaŋ* (or when possible any of the other class nouns, cf. 3.6 below), region nouns correspond semantically to place adverbs in English, which similarly allow the Landmark to remain implicit. Also similar to English (e. g. *He is inside the house*) it is possible to use *khâaŋ* + region-noun expressions with explicit Landmarks, but this makes the expression of Region so over-emphasized that it is stilted outside of special, marked contexts.

(36) a.	*man*	*yùu*	*khâaŋ*	___	
b.	*?man*	*yùu*	*khâaŋ*	___	*bâan*
c.	*man*	*yùu*		___	*bâan*
	it	exist	side		house
	'It is in/out of … the house.'				

The unmarked way to express the respective Region (and FoR) values along with a following LM-NP is simply to omit *khâaŋ*, as in (36 c). This fact can make these expressions seem a lot like prepositions, and indeed most textbooks, as well as Noss (1964), treat them so. This, however would blur the distinction between them and the forms described in 3.5, while it is important to maintain the difference between the two classes: Region nouns express neither Path, nor Direction, and when they co-occur with prepositions they always follow, as shown in (37).

(37) a.	*dəən*	*ʔòok*	*maa*	*càak*	*nay*	*thâm*
	walk	exit	come	from	inside	cave
b.	**dəən*	*ʔòok*	*maa*	*nay*	*càak*	*thâm*
	walk	exit	come	inside	from	cave
	It came out from inside the cave.					

On the other hand, if we regard region nouns as *the heads of the noun phrases they appear in*, then their semantic properties follow naturally. Their noun-like character fits with their meanings as different values of Region (most of the forms in Table 1 derive from concrete nouns) and since they are part of LM-NP, there is no way in which they could precede the prepositions. Thus, their distribution can be defined relative to LM-NP, while the place of the latter follows from the schemes provided earlier, cf. (16), (20), (24) and (35).

(38) Region-N ↔ Region + FoR
LM-NP [Class-N __]
LM-NP [(?Class-N) __ LM-N]

3.6. Class nouns

The final spatial form class has only two common members – *khâaŋ* ('side'), which was presented above, and *thaaŋ* ('way'), as well as the less frequent *dâan*, *biaŋ*, and *phaay*, which are basically synonymous with *khâaŋ* when used spatially, cf. (39).[5] Some of the non-spatial uses of these terms are the following: *dâan* ('aspect', 'direction'), *biaŋ* ('aspect'), and *phaay naâ* ('future'). Takahashi (1997 b), who offers an analysis of the polysemy of these terms claims that while overlapping in their "extensions", the central meanings of these expressions employ different Frames of Reference: "[T]he prototypical sense of *khâaŋ* and *dâan* is intrinsic; that of *biaŋ* is relative; and that of *phaay* is relative". However, in failing to distinguish between lexical and grammatical uses, and employing a kind of speculative diachronic analysis motivating the synchronic analysis, the argument is not convincing.

When *thaaŋ* combines with at least four of the expressions from Table 1: *sáay*, *khwǎa*, *nɨɨa* and *tâay*, the joint spatial meaning becomes one of Direction rather than Region, cf. (40). One may notice that *thaaŋ nɨɨa* and *thaaŋ tâay* mean 'North' and 'South' respectively, rather than 'upward' and 'downward' as might be expected.[6] The basic syntactic/semantic schema for class nouns is presented in (41).

(39) *man yùu* ***khâaŋ/dâan/bɨaŋ*** – *(?bâan)*
it exist side – house
'It is on the X side (of the house).'
Region: X (cf. Table 1)

(40) *man yùu* ***thaaŋ*** – *(?bâan)*
it exist way – house
'It is to the X (of the house).'
Region: X (cf. Table 1)

(41) Class-N ↔ Region/Direction
LM-NP [__ Region-N (?LM-N)]

3.7. Summary of overt expression

The six form classes defined and analyzed in this section with respect to their members' participation in the overt expression of spatial meaning constitute a fairly complex system. As seen in the schemas defining the form classes at the end of each sub-section, all but class nouns participate in *conflation* patterns, i. e. their members express more than one spatial semantic category (cf. Figure 1). We may easily reverse the perspective and ask: By how many different forms in a single utterance may a single semantic category be expressed, i. e. what kind of patterns of *distributedness* are there? The answer is that five of the seven spatial semantic categories – apart from the Trajector and Landmark, which are mainly expressed complementarily via the TR-NP and the LM-N – are normally expressed with at least two, and sometimes up to five different form classes in the same spatial utterance. (42) summarizes the observed patterns.

(42) a. Path ↔ Path-V (+ Deictic-V)* + Prep
b. Motion ↔ Manner-V + Path-V/Dir-V + Deictic-V
c. Region ↔ Path-V + Prep + Region-N (+ Deictic-V)
d. Direction ↔ Dir-V + Deictic-V + Class-N
e. FoR ↔ Dir-V + Deictic-V + Prep + Region-N + LM-NP

*only when there is LM-NP

This obviously implies that there will be constraints on what kind of values may occur within the different "slots", yielding semantic constraints on grammaticality. Some of these will be stated in Section 5, but before that the role of manner verbs in Thai needs to be made clearer.

4. The role of manner verbs for spatial meaning

The six form classes analyzed in the previous section did not include the class of manner verbs, which nevertheless figured prominently in the definition of the contexts of the other classes, and at least in one case, in their meaning. The reason for this omission involved the seeming inability of path verbs to express Frame of Reference when occurring alone, but gaining this possibility in the context of either a following deictic verb (which is not surprising since these express a FoR anyway) – or a preceding manner verb. There is no motivation for attributing FoR to manner

verbs when they occur on their own, and thus to count manner verbs as overt expressions of spatial meaning across the board (though there may be some cases for which this is the case as we will see below). The conclusion is that we should regard the distributed expression of FoR between manner and path verb as a form of covert expression.

(43) Manner-V + Path-V → FoR: ALLO

The schematization in (43) may seem surprising, since from the perspective of Talmy's (1985) typological distinction between "verb framed languages (with verbs expressing Path, and adverb-like forms expressing Manner) and "satellite-framed" languages (with verbs typically expressing Manner and particles/adverbs expressing Path) one would not expect to find languages where both path verbs and manner verbs play a pivotal role, and even more so – to collaborate in the expression of a semantic category.

But this surprising state of affairs nevertheless holds in Thai! We already saw that path (and direction) verbs play a central role, enough so to lead Wienold (1995) to treat Thai as a "path verb language" along with e. g. Japanese and Korean. With respect to manner verbs, we have so far only seen *dəən* ('walk'), but the category is much richer. Takahashi (1997 a) lists 26 verbs which form a sub-class of manner-of-motion verbs, namely those which express "global locomotory body motion": *wîŋ* ('run'), *kâaw* ('stride'), *khajèe* ('limp') and so on. Furthermore, it is not difficult to find among this list verbs which participate in the covert expression of at least one more spatial semantic category, Direction, such as those listed in (44).

(44) a. *luy* ('wade') Direction: FORWARD
b. *(kra)coon*, ('leap') Direction: UP AND FORWARD
c. *chòop*, ('swoop') Direction: DOWN AND FORWARD

In some cases it is more natural to attribute the spatial meaning not to the lexical item, but to the *background of practices*. For example *ram*, glossed by Takahashi as 'walk about gracefully or rhythmically' (as in the traditional Thai *ram* dance) refers to an activity which simply can not be performed in either an upward or downward direction, but must rather have a HORIZONTAL orientation.

For two manner verbs, one may even argue that their expression of Direction is *overt*, since a paradigmatic contrast is involved, albeit in

the case of fairly marginal and certainly low-frequent forms: *thàt* ('more FORWARD little by little in a sitting position') and *thòt* ('move BACKWARD little by little in a sitting position').

In sum, manner-of-motion verbs are not only a strongly represented form class in Thai, but they participate (indirectly) in the expression of spatial meaning along with forms – the path verbs – with which they should hardly occur in the same language at all according to received wisdom. This obviously calls into question any strong form of the typological division "verb framed (path verb)"/"satellite framed (manner verb)" languages. It should be remarked, though, that there is a semantic complementarity between manner and path verbs – the semantic category being (indirectly) expressed by Thai manner verbs is Direction, and not Path, a generalization also made by Takahashi (1997 a).

5. Semantic constraints on grammaticality

The analyses presented in the previous two sections allow us to account for the ungrammaticality of a number of types of spatial expressions which do not break purely distributional constraints, such as the precedence relation between manner verbs and path verbs (cf. Section 3.1), or between prepositions and region nouns (cf. Section 3.5). Consistent with one of the basic premises of cognitive and functional linguistics – that grammar is *motivated*, rather than purely formal and arbitrary – I will in this section show how the ungrammaticality (deviation) of certain types of spatial utterances can be accounted for on semantic grounds. Two kinds of semantically motivated ungrammaticality are observed: *mismatches of values* and *underspecification*.

5.1. Mismatches between values expressed in different form classes

Three of the semantic categories shown in (42) to be expressed distributedly may easily give rise to semantic conflicts: Path, Region and Direction. For example, in (45) the values for both Path and Region expressed in the path verb and preposition differ, resulting in an incoherent meaning (unless the sentence is understood as having an implicit Landmark, different from the specified 'garden').

(45) **khâw pay taam sǔan*
enter go along garden
Path: BEGIN – Region: EXTERIOR, Path: END – Region: INTERIOR
Path: MIDDLE – Region: ALONGSIDE
'??enter and go along the garden (at the same time)'

In (46) the ungrammaticality results from a clash between the Region values of the path verb and the region noun.

(46) **ʔɔ̀ɔk nay hɔ̂ɔŋ*
exit in room
Path: END – Region: EXTERIOR Region: INTERIOR
'?? go out in the room'

As pointed out by (Takahashi 1997 a), a clear indication that manner verbs may express Direction (even if only covertly) is that they can clash with the meaning of another direction verb, which has an inconsistent value, as in (47).

(47) **chòop thɔ̌ɔy*
Direction: DOWN AND FORWARD Direction: BACKWORD
'?? stoop backwards'

On the other hand, while Frame of Reference is the most distributedly expressed category cf. (42 e) it is hard to come up with "mismatches", since the different values combine with each other to express a situation which is perspectivized from several different viewpoints, as in the rather contrived but grammatical example (48).

(48) *loŋ maa càak nâa bâan*
go-down come from front house
GEOCENTIC DEICTIC ALLO ALLO/DEICTIC ALLO
'He came down from the front of the house.'

As a final instance of value mismatch, let us consider again the somewhat puzzling situation encountered earlier: In most cases (and for most Thai speakers) the combination path verb + deictic verb + LM-NP (49 c) is ungrammatical, while path verb + deictic verb (49 a) and path verb + LM-NP (49 c) are unproblematic. Interposing an appropriate region noun between the deictic verb and the LM-NP also "cancels out" the ungrammaticality (49 d).

(49)	a.	*khâw*	*pay*		
	b.	*khâw*			*hɔ̂ɔŋ*
	c.	*??khâw*		*pay*	*hɔ̂ɔŋ*
	d.	*khâw*	*pay*	*nay*	*hɔ̂ɔŋ*
		enter	go	in	room

The explanation of this phenomenon was first suggested in Section 3.3 when we observed that when followed by a LM-NP, the deictic verbs not only express Direction in relation to the deictic center, but also express Path: END in relation to the LM-NP. This was codified in the second definition of the syntagmatic context and meaning of these verbs, (24 b). Thus, in (49 c) (and the other problematic cases), we have a clash of Region values for Path: END – the path verb tells us that the motion ends somewhere 'inside', or 'beyond' the Landmark, while *pay* tells us that it is identical with the Landmark. Perfectly consistent with this interpretation is the complete grammaticality of (11), here repeated as (50), where the path verb and the deictic verb have the same, or at least quite consistent, values.

(50)	*khǎw*	*klàp*	*pay*	*bâan*
	he/she	return	go	home
	'He/she is returning home.'			

Similarly, interposing the region noun *nay* in (49 d) resolves the contradiction between *khâw* and *pay*, because now the Region at which the motion event ends according to *pay* is the "inside of the house", which is exactly what *khâw* states as well.

5.2. Underspecification

A somewhat different kind of ungrammaticality derives not from specifying incoherent values, but from *underspecifying* the spatial situation. For example, in (51 a) the complement noun can not be integrated at all, and thus fails to serve as a Landmark. Since the direction verb *thɔ̌ɔy* defines the direction of motion in relation to the intrinsic orientation of the Trajector (i. e. the mover) the relation of *pratuu* to the motion event remains undefined. In (51 b), on the other hand, the preposition *thîi* introduces a new FoR which "frames" the noun phrase, making it clear that it is a LM-NP.

(51) a. **thɔ̌ɔy* *pratuu*
go-back door
FoR (TR): ALLOCENTRIC ?

b. *thɔ̌ɔy* *pay* *thîi* *pratuu*
go-back go at door
FoR (TR): ALLOCENTRIC FoR (LM): ALLOCENTRIC LM
'Go backwards to the door.'

Finally, let us recall example (10), here repeated as (52), showing that unassisted, Thai path verbs fail to anchor the spatial utterance, i. e. to express a value for Frame of Reference, while they do so in combination with either manner verbs, or other classes which do express FoR. Thus, we may formulate a general semantic condition on grammaticality: **At least one FoR needs to be overtly expressed in the spatial utterance.**

(52) *??khǎw (kamlaŋ) khâw/ʔɔ̀ɔk/ləəy/klàp/phàan/khâam*
he/she PROG enter/exit/go-beyond/return/pass/cross
'He/she is entering/exiting/going beyond/returning/passing through/crossing'

6. Conclusions

In this chapter, the theory of holistic spatial semantics (HSS) was applied to the analysis of spatial utterances in Thai. While many questions still remain, for example concerning the relation between the category Aspect and those described, about the possibility of formulating still more precise accounts etc, I hope to have shown that the analysis yields insights in a surprisingly complex system of spatial grammar and meaning. Let me conclude by highlighting some general theoretical implications of the present study.

First, it is clear that a theory of spatial semantics must consider the interaction between *closed-class* (grammatical) and *open-class* (lexical) expressions, rather than focus exclusively on the first. Contra the theories of Talmy (1988) and Svorou (1994), in Thai the typical closed classes of *prepositions*, *region nouns* and *class nouns* do not differ qualitatively from the open class of *verbs* with respect to their spatial semantics.

Second, the widely-held typological distinction (cf. Talmy 1985) between "verb framed languages" – with Path being expressed by verbs

and Manner by other means (e. g. Spanish) – and "satellite-framed languages" – with verbs expressing Manner and particles or prefixes Path (e. g. English) – is inadequate for at least some languages, and is therefore not a universal. Thai (as supposedly other serial verb languages) has classes of path verbs as well as manner verbs, and it is difficult to say which one should be considered dominant.

Third, it is possible to combine a dialogical, holistic approach to language with rigorous grammatical and semantic analysis, giving rise to generalizations about form classes and their meanings. This requires, however, separating the more clearly semantic, (in the sense of *conventionalized*) from more "pragmatic" (in the sense of *inferred*) aspects of meaning. In holistic spatial semantics this corresponds to the division between *overt expression* and *covert expression/background specification.* Failing to make such a distinction is likely to conceal the systematic relationship between linguistic form and meaning which is the essence of grammar.

Finally, an adequate characterization of word classes in particular, and grammar in general, needs to take both semantic and distributional/structural properties into consideration. While formalist approaches err in ignoring the semantic dimension, cognitive approaches tend to err by ignoring the distributional/structural dimension.

Notes

1. For example, Miller and Johnson-Laird (1976), Talmy (1983), Jackendoff (1983) and Lakoff (1987) and Svorou (1994).
2. English, Swedish, Spanish, Italian, Serbo-Croatian and Bulgarian, and 3 non-IE languages: Finnish, Estonian and Japanese, supplemented with the analysis of secondary data from languages, whose spatial systems are reputedly difficult for universalist analyses: Archi (Dagestanian), Ewe (West-African) and Tzeltal (Mayan).
3. This does not imply an "objectivist" semantics, since e. g. *The tree is by the car* and *The car is by the tree* correspond to different situations when these are understood as representing the lived world of human experience, rather than the "real world".
4. Thai informants vary immensely on their tolerance of e. g. (8 b) – from acceptance to complete rejection, but even those who accept it, state that the sentence is better either without *pay* (8 a) or with the Region noun *nay* (*khâw pay nay hɔ̀ɔŋ*). This fact will be addressed in Section 5.

5. In the Thai "frog story" corpus (Zlatev and Yangklang in press), consisting of 50 narratives and 23554 word tokens *khâaŋ* occurs 40 times, *thaaŋ* 10 times (including lexical noun and preposition uses), *dâan* 2 times, *bɨ̂aŋ* 2 times and *phaay* only once.
6. The polysemy of *nɨ̌a* ('North', 'above') and *tâay* ('South', 'below') is probably due to the geography of Thailand, which is more mountainous in the North and more flat in the South, rather than the conventional directionality of maps, even though it seems to be synchronically reinforced by the current use of such maps in Thailand.

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The bodily dimension of meaning in Chinese: what do we do and mean with “hands”?*

Ning Yu

1. Introduction

In this study I explore the bodily dimension of meaning in Chinese from the theoretical perspective of cognitive semantics (Lakoff and Johnson 1980, 1999; Johnson 1987; Lakoff 1987; Langacker 1987; Sweetser 1990; Turner 1991; Gibbs 1994). I present evidence taken from the Chinese lexicon in support of the claim that our bodily experience plays a prominent role in the emergence of linguistic meaning. In particular I attempt to demonstrate that much of meaning originates in bodily experience and that the body and its behavior in environment are bearers of meaning.

As humans, our bodily experience provides the experiential basis of our cognition. This bodily basis of human meaning is reflected in the language we use. For instance, it has been widely documented that body-part terms are used to describe or characterize object parts and locative relationships across languages (e. g., Brugman 1983; Brugman and Macaulay 1986; MacLaury 1989; Levinson 1994; Svorou 1994; Walsh 1994; Allan 1995; Heine 1995; Matsumoto 1999). Body-part terms are also found to denote temporal and logical relationships (e. g., Hollenbach 1995) and linguistic actions (e. g., Goossens 1995; Pauwels and Simon-Vandenbergen 1995). All this provides evidence for the linguistic manifestation of embodied cognition.

The present study also aims to uncover such embodied cognition via a systematic linguistic analysis. I focus on a particular body-part term in Chinese, *shǒu* ‘hand’, as it is used in the Chinese lexicon to denote abstract concepts via metaphor and metonymy. I will cite some English idioms, where relevant, for the purpose of comparison.[1]

It goes without saying that our hands are one of our most important external body parts with which we deal with the external world. As humans, with bipedal and upright posture, we eat, work, and play with our hands. Different from four-legged animals, we humans walk and run with our two legs, but we still need to swing our hands to keep our body in balance. Our everyday bodily experiences with hands establish the cogni-

tive schemas upon which we build more abstract and complex concepts. This is a process of metaphoric and metonymic conceptualization and categorization. It is then manifested in our language. To illustrate the embodied nature of abstraction, let me cite a few examples. Given in (1) is a set phrase containing *shǒu* 'hand', as well as *yǎn* 'eyes'. This aphorism describes the psycho-social inconsistencies of people whose ability does not match their wishes, or who are too critical of others' ability while they themselves are not capable at all. However, the abstraction is grounded in our bodily experience. Our eyes set goals, and our hands act to achieve those goals. While we can "aim high" with our eyes, our aim may be too high for us to "reach" with our hands.

(1) *yǎn-gāo shǒu-dī*
eyes-high hands-low
'have high standards but little ability; have great ambition but little talent; have sharp eyes in criticizing others but clumsy hands in doing things oneself'

(2) *Yǒuxiē lǐngdǎo zuǐ-yìng shǒu-ruǎn.*
some leaders mouth-tough hands-soft
'Some leaders talk tough but act soft.'

(3) *Liǎng-shǒu zhuā, liǎng-shǒu dōu yào yìng.*
two-hands grab, two-hands both must-be tough
'To grab with both hands, with both hands tough.'

In (2), which contains *shǒu* 'hand' and *zuǐ* 'mouth', "hands-soft" refers metaphorically to some leaders' inability or unwillingness to back up in deeds their tough talk in words ("mouth-tough"). In particular, the sentence may refer to those leaders who are unable or unwilling to carry out the well-known political slogan in China, once strongly advocated by the late leader Deng Xiaoping, as in (3). The slogan is known as "the two-hand strategy". In Chinese the verb *zhuā* literally means "grab". In a more abstract sense, it also means "take charge of something (especially, a task)". More specifically, "to grab with both hands" refers to a balanced effort to promote construction of both "material civilization" and "spiritual civilization", which are also synonymous expressions for "economic reform" and "political control". That is, *on the one hand,* China should open up economically to increase the growth, and *on the other hand,* it also needs to tighten up politically to maintain social stability. A leader

should work equally hard on both fronts, namely, "to grab with both hands tough, rather than one hand tough and the other soft".

Again, such abstract concepts of "balanced effort" and "hard work" are grounded in our bodily experiences with hands. Or, to put it differently, our concrete bodily experiences have worked their way up to help us make sense of more abstract concepts and enable us to reason about them. Note that one of the preceding sentences contains the English expression *on the one hand … on the other hand*. This expression also shows the contrast between two aspects that balance each other off. Often used to refer to a contrast of abstract concepts, it has clearly been derived from our experience of a body that is basically symmetrical along its primary axis.

In the following I will demonstrate the distribution of *shǒu* 'hand' in the Chinese lexicon, illustrating with sentences where necessary.[2] In the Chinese lexicon, a large number of compounds contain *shǒu* 'hand' as a constituent. I will not include, however, compounds referring to concrete objects, such as *bān-shǒu* (pull/turn-hand) 'spanner; wrench' and *fú-shǒu* (support-hand) 'handrail; banisters'. The compounds to be discussed can be roughly divided into nominals and verbals,[3] which are separately dealt with in the two sections below.

2. Nominals

In nominal compounds, the morpheme *shǒu* 'hand' can be either the modified or modifying constituent. When it is a modified constituent, it is preceded by a modifier, which can be adjectival, verbal, or nominal. When it is a modifier, it precedes the head nominal.

2.1. Hands and persons

In the Chinese lexicon *shǒu* 'hand' is used very often in a metonymic (synecdochic) mold to refer to the whole person, as represented by the conceptual metonymy THE HAND STANDS FOR THE PERSON.[4] Many compounds of this kind focus on the ability, competence, expertise, experience of a person in general or in a particular trade, profession, or skill. Typically, these are adjective-noun compounds, as in (4).

(4) a. *gāo-shǒu* (high-hand) 'past master; master-hand'
b. *dī-shǒu* (low-hand) 'incompetent person'

c. *yìng-shǒu* (hard/tough-hand) 'skilled hand; able person'
d. *hǎo-shǒu* (good-hand) 'good hand; past master'
e. *néng-shǒu* (able-hand) 'dab; expert; crackerjack; good hand'
f. *miào-shǒu* (marvelous-hand) 'highly skilled man'
g. *lǐ-shǒu* (inside-hand) 'expert; old hand'

Since hands are the external body parts with which people work, those who are good or bad at doing something are then said to have good or bad hands for carrying it out. In (4 a) and (4 b) the quality of being good or bad is conceptualized metaphorically in spatial terms: a "high" hand is better than a "low" hand. It is interesting to note that in Chinese a brilliant disciple or student of a good master or teacher is called a *gāo-zú* (high-foot). In the human body schema, a "high foot" is still lower than a "high hand".

(5) a. *duì-shǒu* (opposing/opposite-hand) 'opponent; rival'
b. *dí-shǒu* (enemy-hand) '(of an opponent) match; adversary'
c. *guó-shǒu* (nation/national-hand) 'athlete or player on the national team'

The term *shǒu* 'hand' is also used metonymically to refer to people who compete, in sports and otherwise, as in (5). Terms such as (5 a, b) probably originate in physical fights, like Chinese martial arts, in which opponents often fight with their hands. Here are some related compounds: *jiāo-shǒu* (cross-hand) means either "a fight/battle" or "to fight (with sb.)"; *chū-shǒu* (deal.out-hand) means "the opening moves (in a fight); start to fight"; *huán-shǒu* (return-hand) means "to strike/hit back". Besides, in a fight, a draw or tie is called *píng-shǒu* (even-hand). It is apparently a spatial metaphor in which neither of the two opponents "gets the upper hand" (cf. 4 a, b). These compounds have been mapped onto various kinds of physical and abstract competition, bringing with them the inference pattern of the source domain of physical fights with hands. In contrast to (5 c), a player on the national soccer team is called a *guó-jiǎo* (nation/national-foot).

Since hands are usually applied directly to tasks, those who work as assistants to their superiors are called "hands", as in (6). It is interesting to note that, as in (6 d), "second hand" in Chinese can refer to an assistant, in the sense that the person is "second" to the "first hand", the person in charge, whereas in English it only means "used" or "unoriginal". In (6 e) a "under hand" is the person who works "under the hand

of" (i. e., assists) another person (cf. 11 b below). (6 f) shows a difference between Chinese and English. In English a capable assistant is called *a right hand* or *a right-hand man*, whereas *left-handed* is associated with some derogatory senses, such as "unskillful", "awkward", or "unsuccessful" (e. g., *Longman Dictionary of Contemporary English*). This asymmetry does not exist in Chinese.

(6) a. *zhù-shǒu* (assistant-hand) 'aide; assistant; helper'
b. *bāng-shǒu* (help-hand) 'helper; assistant'
c. *fù-shǒu* (vice/deputy-hand) 'assistant; helper'
d. *èr-shǒu* (second-hand) 'assistant; secondhand'
e. *xià-shǒu* (under-hand) 'assistant; helper'
f. *zuǒ-yòu-shǒu* (left-right-hand) 'right hand; right-hand man'

(7) a. *hēi-shǒu* (black-hand) 'a vicious person manipulating sb. or sth. from behind the scene; evil backstage manipulator'
b. *dǎ-shǒu* (beat-hand) 'hired roughneck; hired thug'
c. *pá-shǒu* (pick-hand) 'pickpocket; shoplifter'
d. *qí-shǒu* (flag-hand) 'flag holder; forerunner; leader'
e. *duò-shǒu* (helm-hand) 'helmsman; steersman; leader'

The words in (7) are often used in metaphorical senses. For instance, (7 c) can refer to people in politics who make illegitimate political profits. (7 d) literally refers to the person who holds the flag in front of a troop in a marching parade. But by metaphor it has come to mean "leader" or "forerunner" of a movement. (7 e), literally referring to the person who steers the helm on a ship, has often been used as a metaphor for the leader of a nation who navigates the nation as a ship. The examples in (4–7) reflect the conceptual metonymy THE HAND STANDS FOR THE PERSON, which is also found in English. People are physical living things in the world, but the synecdochic process involved here, like close-ups in visual arts, characterizes them in a way that highlights their certain abstract qualities.

2.2. Hands and means

Now, I turn to compounds that are abstract nouns. In these, the term *shǒu* 'hand' is usually the modifying constituent of a noun-noun compound. Means, measures, skills, techniques, tactics, tricks, and artifices are all associated with "hands", but their meaning has extended from

the physical domain of bodily activities into abstract domains of mental activities. The metonymy at work is THE HAND STANDS FOR THE SKILL/MEANS.

(8) a. *shŏu-duàn* (hand-part) 'means; measure; method; artifice'
b. *shŏu-fă* (hand-method) 'skill; technique; trick; gimmick'
c. *shŏu-wàn* (hand-wrist) 'trick; artifice; skill; finesse; tactics'
d. *shŏu-bĭ* (hand-pen) 'literary skill; (manner of handling things or spending money) ostentation and extravagance'

(8 a) can be modified by *tiĕ-wàn* (iron-wrist) to form an idiomatic phrase *tiĕ-wàn shŏu-duàn* (iron-wrist means), which simply means "strong and firm means". A strong hand should be supported by a strong "wrist". The strength of hands is associated with the concepts of power and control. I will return to this connection shortly. When people are doing manual work (e. g., handicrafts), the skills or techniques of doing the job is the way (i. e., the method) their hands move, hence "hand method" for skill and technique in general, as in (8 b). Skilful movements of hands, to some extent, depend on the function of the wrist, and that is how "hand wrist" is related to tricks, artifices, and so forth, originally played by hands (8 c). Writers' literary skills are manifested in their literary works originally written out with a pen held in the hand (of course, before the typewriter and computer eras). Therefore, the former is associated with how the pen is used by the hand in writing (8 d).

(9) a. *shŏu-tŏu* (hand-end) 'at/on hand; one's financial condition at the moment'
b. *shŏu-miàn* (hand-surface/size) '(*dial.*) the extent of one's spending'

The two examples in (9) are related to financial means and the manner of spending money. Both are usually understood in spatial terms, as in (10). People use their hands to give out money when they spend it. Therefore, hands are associated with the manner of spending and the financial condition, so (10 a) and (10 b) have a metonymic basis. But in reality one's financial situation has nothing to do with "the end of one's hands", nor does one's manner of spending have anything to do with "the surface/size of one's hands". They involve mapping from the concrete to the abstract, so they are also metaphorical.

(10) a. *Tā shu-tóu bǐ guòqù kuān duō le.*
he hand-end compared-with past wider a-lot PRT
'He's much better off than before.'

b. *Nǐ shǒu-miàn tài kuò le, yào jiēyuē*
you hand-surface too broad PRT need be-thrifty
yīdiǎn cái hǎo.
a-little-more then better
'You spend too freely, and you should be more thrifty.'

As mentioned earlier, the hand is associated with power and control, which always involve skills, means, tactics, etc. Kövecses and Szabó (1996) defined the relevant metonymy and metaphor as THE HAND STANDS FOR CONTROL and CONTROL IS HOLDING IN THE HAND. Also at work is the orientational metaphor CONTROL IS UP. These are represented by the compounds in (11). "Hand-heart" literally refers to the center of the palm, which metaphorically refers to control (see Yu 2000a). If you are "at the center of my palm" (11 a), you are "in my grip" or under my control. If you are "under my hands" (11 b), you are under my leadership, guidance, direction, or control (cf. 6 e).

(11) a. *shu-xīn* (hand-heart/center) '(the extent of) control'
b. *shǒu-xià* (hand-underneath/below) 'under the leadership (or guidance, direction) of; under; at the hands of sb.'

Apparently, the association of hands with power and control is parallel in Chinese and English. In English, one can say: *His life was in my hand, I suffered at his hands, The meeting is getting out of hand, I'll give you a free hand, The cabinet approved last week strengthened his hand for the difficult tasks ahead.* Pertinent idiomatic phrases include: *rule with an iron hand*, *keep a strict hand upon a person*, etc. The metonymic and metaphoric conceptualizations behind these expressions are very similar to the Chinese expressions.

3. Verbals

Now I turn to a discussion of the class of verbal compounds. Although other forms are possible, most verbal compounds containing *shǒu* 'hand'

are subject-predicate or verb-object constructions. In the former, *shǒu* 'hand' is the "subject", predicated by a verb (including adjective) that follows it. In the latter, *shǒu* 'hand' is the "object" following a verb.[5]

3.1. Hands and traits

The first group of verbals, in (12), contains subject-predicate compounds. The morpheme *shǒu* 'hand' takes the first position, followed by an adjectival predicate that describes a particular characteristic of the hand. The *shǒu* constituent here is no longer used synecdochically to stand for the whole person, as in (4–7) above, but the compounds still characterize the people they describe.

(12) a. shǒu-yǎng (hand-itch) 'one's fingers itch; have an itch to do sth.; be anxious to do sth.'
b. *shǒu-niān* (hand-sticky) 'sticky-fingered; thievish'
c. *shǒu-cháng* (hand-long) 'be greedy; grasping'
d. *shǒu-duǎn* (hand-short) 'feel in the wrong for taking bribes'
e. *shǒu-ruǎn* (hand-soft) 'be irresolute; be softhearted'
f. *shǒu-hēi* (hand-black) '(*dial.*) cruel'
g. *shǒu-là* (hand-peppery) 'vicious; ruthless'
h. *shǒu-sōng* (hand-loose) 'free with one's money; free-handed; open-handed'
i. *shǒu-jǐn* (hand-tight) 'closefisted; tightfisted; be hard up'
j. *shǒu-dà* (hand-big) 'spend money freely'

When anxious to do something, people feel "an itch in their hands" (12 a). The feeling of "itch" is connected to the concept of anxiety to do something in both Chinese and English, but this bodily feeling is "located" in hands in Chinese and in fingers in English (See Yu 2000a). In (12 b) thieves are said to have "sticky hands" that will have things stuck onto them. In English, *He is sticky-fingered* or *He has sticky fingers* makes use of a similar conceptualization. (12 c) says that greedy people have exceptionally "long hands" that can reach out farther than ordinary hands. It resembles the English word *grasping* in the sense of "eager for more". Example (12 d) refers to people who have taken bribes and therefore cannot act with justice as if they had "shorter hands" now. (13) is a popular aphorism in Chinese: "mouth-soft" is the opposite of "mouth-tough" in (2). After you have eaten others' treats, you are unable even to "talk tough" any more.

(13) *Ná le rénjia-de shǒu-duǎn, chī le rénjia-de zuǐ-ruǎn.*
take PRT others' hand-short eat PRT others' mouth-soft
'If you have taken others' bribes, your hands are short; if you have eaten others' treats, your mouth is soft (i. e., One cannot act with justice after taking bribes; one cannot speak uprightly after eating others' treats).'

In (12 e) "hands soft" is again the same as in (2). With "soft hands", one cannot handle things that are "tough". (12 f, g) have similar meanings, both describing people who are cruel, vicious, and ruthless, and often used in idioms like *xīn-hěn shǒu-hēi* (heart-cruel hand-black) 'cruel and vicious' and *xīn-dú shǒu-là* (heart-poison hand-peppery) 'wicked and malignant'. Note that *shǒu-hēi* (hand-black) and *hēi-shǒu* (black-hand) in (7 a) are different. The former is a verb meaning "to be cruel"; the latter is a noun referring to "an evil backstage manipulator". (12 h–j) denote the attitudes or manners with which people spend money (cf. 9 a, b). If their "hands are loose", money will "flow" out fast through their fingers. If, on the other hand, "their hands are tight", they can hold the money and save it. People with "big hands" tend to spend money in "big" ways. Those who are wasteful and extravagant are said to have "big hands and big feet" (*dà-shǒu dà-jiǎo*). To some extent, English usage parallels Chinese usage in this domain. For instance, people unwilling to spend money are said to be "closefisted" or "tightfisted"; people happy to spend are said to be "open-handed" or "free-handed". The difference, of course, is that the feet do not enter into the English usage.

Now the question remains as to the cognitive processes involved in forming the compounds of (12). They all seem to characterize people's psychological states in terms of the physical states of their hands. However, (12 a) *shǒu-yǎng* 'hand-itch' may be distinguished from the rest of the group. It arguably involves a metonymic process in which the physical reaction in the hands (they "itch") is linked to a person's mental state of anxiety and stands for that mental state. But the remaining ones in (12) should be taken as instances of a metaphor THE PSYCHOLOGICAL CHARACTERISTIC OF A PERSON IS THE PHYSICAL CHARACTERISTIC OF HIS/HER HAND. It is upon this metaphoric basis that the metonymy THE HAND STANDS FOR THE PERSON has also operated. Of course, other metaphors may motivate particular cases. For instance, (12 f) *shǒu-hēi* (hand-black) 'cruel', as well as (7 a) *hēi-shǒu* (black-hand) 'evil backstage manipulator', involves the metaphor THE MORAL/ETHICAL IS CLEAN or THE IMMORAL/UNETHICAL IS

DIRTY, which also accounts for such English phrases as *have clean hands*, *get one's hands dirty*, and *catch someone red-handed*.

Examples (12 b–j) are metaphorical in that there is no real connection between the psychological characteristics of people and the physical characteristics of their hands. Thus, a greedy person does not necessarily have "long hands" (or rather "long arms") as (12 c) suggests. However, these metaphorical compounds really have their grounding in our daily tactile-kinesthetic experiences with our bodies. For instance, other factors being equal, a basketball player with longer arms has a better chance of grabbing rebounds.

3.2. Hands and moves

As mentioned earlier, hands are external body parts with which physical work is done. When we start to do something physically, we use our hands. Hands then have come to be associated with the idea of "starting something" in general, including mental work that entails the use of one's brains rather than his hands. The metonymy THE HAND STANDS FOR THE ACTIVITY and the metaphor THE MIND IS THE BODY seem to be operative here. (14) contains the Chinese words that mean "start" or "begin", all containing *shǒu* 'hand'. In terms of internal structure they are verb-object compounds.

(14) a. *dòng-shǒu* (move-hand) 'start work; get to work'
b. *zhuó-shǒu* (put.to-hand) 'put one's hand to; set about'
c. *rù-shǒu* (put.into-hand) 'start with; begin with'
d. *xià-shǒu* (lower-hand) 'put one's hand to; start doing sth.'
e. *shàng-shǒu* (get.up.into-hand) 'get started'
f. *kāi-shǒu* (open-hand) '(*dial.*) start; begin'

Obviously, the meaning here has derived from our bodily experiences with our hands as we deal with the physical world. When we start to do something, we "move our hands" (14 a) and "put them to the thing" (14 b) we do. Or we "put our hands into the thing" (14 c) in order to "handle" it. Sometimes we "lower our hands to the thing" we do as we start to "bend over" it (14 d). Or, the thing gets started when it "gets up into our hands" (14 e). Usually, we cannot "handle" things with our hands closed, so it is necessary for us to "open our hands" first as we start to do something (14 f). (15) provides three sentential examples.

(15) a. *Wŏmen yīng lìjí* ***zhuó-shŏu*** *zhìdìng jìhuà,*
we should immediately put-hand-to work-out plan
zăodiănr ***dòng-shŏu,*** *zăodiănr wánchéng.*
a-little-early move-hand a-little-early finish
'We should immediately start working out a plan. The sooner we start, the sooner we finish.'

b. *Wŏ wánquán bù liăojiĕ qíngkuàng, wúcóng* ***xià-shŏu.***
I completely not know situation no-way lower-hand
'I'm entirely in the dark about this matter, so I have no idea how to handle it (i. e., how to start).'

c. *Jiĕjué wèntí yào cóng diàochá yānjiū*
solve problem should at investigation study
rù-shŏu.
put-hand-into
'To solve a problem, one has to start with investigation (i. e., first put our hand to investigation).'

The examples in (15) show that we "use our hands" even if we start to deal with abstract things. That is, the more abstract concept is expressed in terms of those physical actions of our hands. The English expressions *put one's hand to something* and *turn one's hand to something* reflect similar metonymic and metaphoric extensions.

(16) a. *chā-shŏu* (stick/plant.into-hand) 'take part; lend a hand; have a hand in; poke one's nose in; meddle in'
b. *zhān-shŏu* (touch-hand) 'have a hand in'
c. *dā-shŏu* (join/add-hand) 'give a hand; help'
d. *lèi-shŏu* (tire-hand) '(*dial.*) participate in'

The compounds in (16) all roughly express the meaning of "participating in something". When you have taken part in something, you have either "stuck your hands into" it (16 a), or "made your hands touch' it (16 b), or "joined or added your hands to" it (16 c), or "made your hands tired by causing them to work on the thing" (16 d). It is noteworthy that in English, in addition to the idiom *have a hand in something,* there are still other idiomatic phrases involving the body part *fingers* that have similar or related meanings. For instance, *have/get a finger in something, get one's fingers into something, keep fingers on something, keep fingers on one's own affairs, have/stick a/one's finger in the/every pie* (See Yu 2000 for further discussion).

(17) a. *zhù-shǒu* (stop-hand) 'stay one's hand; stop; hands off'
b. *xiē-shǒu* (rest-hand) 'stop (work, etc.); stop doing st.'
c. *bà-shǒu* (cease-hand) 'give up; stop'
d. *diū-shǒu* (toss-hand) 'wash one's hands of; give up'
e. *liào-shǒu* (put/throw.down-hand) 'lay aside what one is doing; quit; throw up (one's job)'
f. *sā-shǒu* (cast-hand) 'refuse to have anything more to do …'
g. *shuǎi-shǒu* (swing-hand) 'refuse to do; wash one's hands of'
h. *dǒu-shǒu* (jerk-hand) 'wash one's hands of'
i. *xǐ-shǒu* (wash-hand) 'stop doing wrong and reform oneself'
j. *liǎo-shǒu* (be.finished-hand) '(*dial.*) be over and done with'
k. *shōu-shǒu* (take.back/put.away-hand) '(*dial.*) stop working; call it a day'

In contrast to the examples in (14), the words in (17) all have the meaning of "stop (doing st.)". When we cease the activity, we "stop and remove our hands from" it (14 a–c). Sometimes we stop the work by "tossing or throwing or casting it away" (14 d–f). The physical action of our hands metonymically or metaphorically suggests our anxiety to quit the work. Sometimes we stop doing something by "swinging or jerking our hand(s)" to show our contempt to or frustration with the work, as in (14 g, h). In (14 i) one quits by "washing one's hands clean". Typically, this word refers to those who are determined to stop doing wrong things: they would "wash their dirty hands" and "keep them clean" forever. As in (14 j), when one thing is over, it is finished or done with our hands, i. e., it should get out of our hands. It is worth noting that (14 k) is not listed in the dictionaries, but I personally learned it from the speakers of a dialect in Hubei Province of China. It seems to make good sense that whenever we quit, we "take our hands back and put them away".

English also uses the noun *hand* in phrases such as *stay one's hand, hands off, wash one's hands of, throw one's hands up.* Besides, in phrases such as *give up, throw up,* or *lay aside (what one is doing),* the use of hands is implied even though it is not lexicalized.

3.3. Hands and transactions

As can be seen from (14–17), based on our bodily experience, we conceptualize "starting, doing, and stopping something" in terms of physical contact between our hands and some object. This section discusses exam-

ples that refer to managing one's business affairs. In a broader sense, business handling is related to the concept of control. If you are in charge of a certain business, you control it. If you fail to handle the business, you lose control of it. Besides, the conceptualization of business as an object motivates the metonymy THE HAND STANDS FOR CONTROL and the metaphor CONTROL IS HOLDING IN THE HAND.

(18) a. *jiē-shǒu* (take.over-hand) 'take over (a job, responsibilities)'
b. *jīng-shǒu* (pass-hand) 'handle; deal with'
c. *guò-shǒu* (pass/cross-hand) 'handle'

In (18 a), as people take over a job, the job and the duties associated with it are "handed over" to them. They then have the job and everything going with it in their hands. If they have too many things to do at a time, they "have their hands full". The English phrase *take over* also suggests an action by hands. (18 b, c) show that if people have handled or dealt with something, it should have "passed through their hands". The English verb *handle* obviously has *hand* as its root. Another English example is a commercial printed on the stationery of an insurance company: "Allstate – You're in good hands". In both languages, the physical reasoning has mapped into an abstract domain.

This type of reasoning is also reflected in goods and property transaction, ownership, etc. The metaphor in operation is POSSESSION IS HOLDING IN THE HAND. See (19) below.

(19) a. *dǎo-shǒu* (shift-hand) 'change hands'
b. *zhuǎn-shǒu* (turn-hand) 'sell what one has bought'
c. *yì-shǒu* (change-hand) '(of properties) change hands'
d. *dào-shǒu* (reach-hand) 'come to one's hands'
e. *tuō-shǒu* (get.off-hand) 'sell; dispose of'
f. *chū-shǒu* (get.off-hand) 'get off one's hands; sell'
g. *qiǎng-shǒu* (snatch-hand) '(of goods) in great demand'

(19 a, b) both refer to "making profits by selling what one has bought". The imagery is that one takes in goods from another person's hands, and then passes them off to the hands of a different person. (19 c) denotes the change of ownership of properties. In (19 d) buying or obtaining is conceptualized as "getting things into one's hands", whereas in (19 e, f) the idea of selling is said to be "getting things off one's hands". Additionally, the phrase *chū-shǒu dà* (get.off-hand big) means "spend money

freely" (cf. 12 j). (19 g) describes the great demand on particular goods. Goods that enjoy very good sale are called *qiǎng-shǒu huò* 'goods in great demand', i. e., they are "goods at which people all snatch with their hands". Given the above examples, it is not difficult to see why used goods are called *èr-shǒu huò* 'second-hand goods'. There is no doubt that more abstract kinds of transactions are modeled on physical transactions expressed by these compounds literally. For the same reason, English has such expressions as *change hands, pass through many hands, come to one's hands,* and *lay one's hand on something*. When *dispose of* means "sell", it suggests the physical actions of using hands.

3.4. Hands and manners

This section discusses examples that literally describe various kinds of physical movements or actions of hands whereas, metonymically and metaphorically, they express abstract states. The conceptual metonymies are THE HAND STANDS FOR THE MANNER and THE HAND STANDS FOR THE ATTITUDE.

(20) a. *shēn-shǒu* (extend-hand) 'ask for (money, honor, gifts); reach out for (official post, power, etc.)'
b. *suō-shǒu* (draw.back-hand) 'shrink from doing st.; be over cautious'
c. *xiù-shǒu* (tuck.in.sleeve-hand) 'look on with folded arms'
d. *chuí-shǒu* (droop-hand) 'obtain st. with hands down'
e. *fǎn-shǒu* (turn.over-hand) 'turn one's hand over – a most easy thing to do'
f. *gǒng-shǒu* (cup-hand [in solution]) 'submissively'
g. *tái-shǒu* (raise-hand) 'be magnanimous; not be too hard on sb.; make an exception in sb's favor'
h. *fàng-shǒu* (release-hand) 'have a free hand; go all out; release one's control; give up'

When we want something, we reach out our hands to grab it. If we are anxious to get it, we may reach out "with both hands". This tactile-kinesthetic reasoning is metaphorically extended to the abstract concept of obtaining honor or power (20 a). So, there are phrases such as *shēn-shǒu yào guān* 'reach out one's hands for an official post', and *shēn-shǒu yào quán* 'reach out one's hands for power'. The instances are related to the metaphor POSSESSION IS HOLDING IN THE HAND. (20 b) refers to a hand

movement opposite to (20 a) in direction. When we want to shrink from doing something, we "draw our hands back" from it. This physical action provides a bodily basis for understanding the abstract concept of withdrawing. (20 b) is often combined with *suō-jiǎo* (draw.back-foot) to result in the idiom *suō-shǒu suō-jiǎo* 'to be over cautious'. When people are nervous, they are likely to "shrink up" with tight muscles. Accordingly, they cannot move their hands and feet freely. Only when they are in a more relaxed state can they be more productive. That is why it is important to "have a free hand" when one does one's work.

In (20 c) *xiù* is primarily a noun meaning "sleeve(s)", and is used as a verb here meaning "tuck … in sleeves". Literally, (20 c) describes an old-fashioned habitual act in Chinese culture: when people are not doing anything, especially in cold weather, they tend to tuck their hands in the sleeves. It is used, metonymically and metaphorically, in an idiom *xiù-shǒu páng-guān* (look on with one's hands tucked in the sleeves) 'look on/stand by with folded arms'. Usually, when we are not doing anything, our hands are down by our sides, in a drooping position, which is their canonical neutral or idle position in accordance to our upright posture. If we can acquire something, e. g., a goal, a success, a win, with our hands down, it means that is a very easy thing to do (20 d). We can acquire it "without lifting a finger". Chinese idioms such as *chuí-shǒu kě dé* 'win something with hands down; get something without lifting a finger' and *chuí-shǒu kě chéng* 'success would be easy and sure' make use of this bodily reasoning. Similarly, (20 e) is used to denote that something is very easy to do or to get, as easy as to turn one's hand over, as in the idiom *fǎn-shǒu kě dé* 'get something as easily as turning one's hand over'. (20 f) usually refers to one's manner or attitude of submissiveness, as in the phrase *gǒng-shǒu ràng rén* 'surrender something submissively; hand something over with a bow'. In Chinese culture, *gǒng-shǒu* is a traditional type of solution, in which one cups one hand in the other before the chest. (20 g) evokes the image of a person standing in the way of another, with both arms extending sideward, blocking the latter's pass. If the former "raises one hand", then the latter can get by spatially, or get off in an abstract sense. When asking for mercy, one would usually use the phrase *gāo tái guì shǒu* (high raise noble hand) 'be lenient; be magnanimous'. (20 h) has two meanings, as exemplified by (21 a, b). In (21 a) *fàng-shǒu* means "have a free hand" or "go all out" while (21 b) is what a professional figure skater says about her unwillingness to give up and end her figure skating career.

(21) a. *Wǒmen xìndeguò nǐ, nǐ jiù* ***fàng-shǒu*** *gàn ba.*
we trust you you just release-hand do PRT
'We trust you. Just do your work with a free hand (i. e., go boldly ahead with your work).'

b. *Wǒ bú yuàn jiùcǐ* ***fàng-shǒu,*** *líkāi wǒ xǐ'ài de huábīng.*
I not willing like-this release-hand leave I love MOD skating
'I'm unwilling to give up like this and leave skating that I love so much.'

In the Chinese lexicon there are more compounds relating to doing or handling things that contain *shǒu* 'hand', as given below.

(22) a. *ná-shǒu* (take-hand) 'adept; expert; good at'
b. *dé-shǒu* (obtain-hand) 'succeed; be accomplished'
c. *yìng-shǒu* (respond-hand) 'convenient; handy'
d. *shùn-shǒu* (convenient-hand) 'at one's convenience'
e. *suí-shǒu* (come.along-hand) 'without extra trouble'
f. *ài-shǒu* (hinder-hand) 'be in the way; be a hindrance'
g. *shù-shǒu* (tie-hand) 'have one's hands tied; be helpless'

When we can "take a firm grasp" of the thing, we are very good at handling it (22 a). In Chinese one's specialty or forte is called *ná-shǒu hǎo xì* (take-hand good play), a drama metaphor meaning "the play that an actor or actress does best". When the matter being dealt with "gets into our hands" or "provides a good hang for us to hold", we can then handle it with success (22 b). When the thing being dealt with is "responsive to our hand movements", then we can handle it with ease (22 c). When the things we do "go along with our hands", we can do them conveniently, as in (22 d, e). In (22 f), on the other hand, we cannot do anything well when our hands are hindered by something. Very often, the idiom *ài-shǒu ài-jiǎo* (hinder-hand hinder-foot) is used in the same sense. It can also denote in an abstract sense people's lack of freedom to act as they want. The implied metaphor is FREEDOM (TO ACT) IS HAVING THE HANDS FREE (FOR ACTION). (22 g) is a related instance, as in the idioms *shù-shǒu shù-jiǎo* (tie-hand tie-foot) 'be bound hands and feet; be over-cautious' and *shù-shǒu wú-cè* (tie-hand no-resources) 'be at a loss what to do; be at one's wit's end'.

Now I turn to a group that comprises diverse examples. Some are adjective-noun compounds, and the others are verb-object ones.

(23) a. *chì-shǒu* (bare-hand) 'unarmed'
b. *kōng-shǒu* (empty-hand) 'empty-handed'
c. *bái-shǒu* (empty-hand) 'empty-handed; with no possessions'
d. *xìn-shǒu* (at.will-hand) 'do st. spontaneously, without much thought or effort'
e. *yī-shǒu* (one-hand) 'skill; trick; single-handed; all alone'
f. *shuāng-shǒu* (both-hands) 'with both hands'
g. *jiǎ-shǒu* (borrow-hand) 'do st. through sb. else'

(23 a–c) all mean "empty-handed" literally, but (22 a) refers to people who are unarmed whereas (23 b, c) refer to people who have no possessions. They often appear in idioms *chì-shǒu kōng-quán* (bare-hand empty-fist) 'unarmed', *kōng-shǒu ér guī* (empty-hand return) 'return empty-handed', and *bái-shǒu qǐ jiā* (empty-hand build-up home) 'start empty-handed; build up one's fortune from scratch'. In (23 d) people who do something spontaneously are said to have their hands act "at their own will", as in the idiom *xìn-shǒu huīhuò* (at.will-hand spend freely) 'spend money at will'. In one sense, (23 e) means "single-handed", as in the idioms *yī-shǒu bāo bàn* (one-hand all-do) 'do everything single-handed; keep everything in one's own hands' and *yī-shǒu zhē tiān* (one-hand cover sky) 'shut out the heavens with one hand'. In a different sense, (23 e) means "proficiency" or "skill", i. e., THE HAND STANDS FOR THE SKILL. Thus, *yǒu yī-shǒu* (have one-hand) means "have proficiency or skill in something", *lòu yī-shǒu* (show one-hand) means "show off one's skill", and *liú yī-shǒu* (save one-hand) means "hold back a trick or two in teaching a trade or skill". (23 f) often occurs in the phrases *shuāng-shǒu pěng-shàng* (both-hand hand over) 'offer on a silver platter' (cf. 20 f) and *shuāng-shǒu zànchéng* (both-hand agree) 'raise both hands in approval; be all for it'. In (23 g) to get someone to do what you want to be done is said to "borrow a hand". A common idiom is *jiǎ-shǒu yú rén* (borrow-hand from a person) 'achieve one's end through the instrumentality of someone else; use the hand of someone else'.

The examples discussed in this section can be seen as linguistically manifesting the metonymy THE HAND STANDS FOR THE ACTIVITY and the metaphor THE MIND IS THE BODY. English has similar examples (Kövecses and Szabó 1996). If people want to wait and see, they would "hold their hand". If they do not want to do anything, they will "sit on their hands"

or "put their hands in their pockets" (cf. 20 c). If people can do something very easily, they are said to "do it with one hand behind their back" (cf. 20 d, e). If they are authorized to act as they see fit, they are "given a free hand" (cf. 20 h). On the other hand, if they are said to "have their hands tied behind their back", it means that they cannot act as they want. These English examples are grounded in the common bodily experiences with hands, too.

3.5. Hands and links

In this section, the compounds that I discuss refer to the abstract notions of unity and disunity, and cooperation and separation, in bodily terms. The conceptual metaphor at work here is UNITY/COOPERATION IS JOINING HANDS or DISUNITY/SEPARATION IS PARTING HANDS.

(24) a. *xié-shŏu* (join-hand) 'join hands; hand in hand'
b. *lián-shŏu* (link-hand) '(*dial.*) take concerted action'
c. *lián-shŏu* (connect-hand) 'be united with; jointly; cooperatively'
d. *hé-shŏu* (combine-hand) '(*dial.*) be cooperative'
e. *gōu-shŏu* (hook-hand) '(*dial.*) collude with; gang up with'
f. *fēn-shŏu* (separate-hand) 'part company with; go separate ways'

As shown in (24 a–d), the meanings of unity, cooperation, and collaboration have been derived from the bodily action of joining hands. (24 a, b) are often used in these idioms: *xié-shŏu bìng jìn* (join-hand side-by-side advance) 'advance together hand in hand' and *lián-shŏu hézuò* (link-hand cooperate) 'take concerted action in cooperation'. (24 c) has exactly the same sound and more or less the same meaning as (24 b). (24 d) is a dialectal usage. (24 e) expresses unity or cooperation in a derogatory sense, i. e., between two bad guys, with their "hands hooked up together" for evil purposes. (24 f), which evokes the image of two hands separating from each other, refers to cutting off relationship with someone, as well as physical separation.

Obviously, the compounds in (24) originally refer to humans with hands. But they have come to denote relationships between institutions, organizations or countries that do not have hands in a physical sense. This metaphorical mapping is manifested in English too. So *join hands with someone* or *be hand in hand with someone* can mean "cooperate with someone" as well as their convey original physical senses.

3.6. Hands and problems

This section discusses the compounds that describe problems that are difficult to handle, as in (25). For (25 a–f) the metaphor is PROBLEMS ARE OBJECTS, while the objects vary in kind, shape, etc. The related metaphor is SOLVING PROBLEMS IS MANIPULATING OBJECTS WITH HANDS. For (25g) the metaphor is PROBLEMS ARE ANIMATE THINGS. Here animate things can be as big as animals or as small as insects.

(25) a. *chán-shŏu* (twine-hand) 'troublesome; hard to deal with; (of an illness) hard to cure'
b. *rào-shŏu* (wind-hand) '(*dial.*) troublesome; thorny'
c. *tàng-shŏu* (scald-hand) 'troublesome; knotty'
d. *jí-shŏu* (thorn-hand) 'thorny; troublesome; knotty'
e. *zhā-shŏu* (prick-hand) 'difficult to handle; thorny'
f. *là-shŏu* (sting-hand) 'thorny; troublesome; knotty'
g. *yăo-shŏu* (bite-hand) '(*dial.*) difficult to handle; thorny'

The bodily experiences underlying these compounds are really familiar ones. If the matter or problem we are dealing with tends to "twine or wind our hands", then it must be troublesome (25 a, b). If something is "scalding hot", like a pot of boiling water, it is then potentially dangerous to deal with (25 c). Similarly, things or problems that "thorn, prick, or sting our hands" must be tough or hard to handle (25 d–f). If we are not careful with the things that can "bite our hands", the consequence for that will not be difficult to imagine (25 g). Given below are two sentential examples of (25 g).

(26) a. *Zhèjiàn shì yĭqián méi gàn guo, gāng jiēchù*
this thing before have-not done PRT just contact
yŏudiăn ***yăo-shŏu.***
a-little bite-hand
'I hadn't done this thing before. When I first contacted (i. e., did) it, it was a little hard to handle (hand-biting).'

b. *Zhè zhŏng dōngxi chéng-tào de măi jiàqián tài*
this kind stuff whole-set PRT buy price too
yăo-shŏu, *hái-shì líng măi ba.*
biting-hand just by-piece buy PRT
'If we buy this stuff by the set, the price is too high (hand-biting). Let's just purchase by the piece.'

As in (26 a), the job is conceptualized as something concrete: your hands can actually "contact" and "handle" it. In this case, however, the job is like an untamed animal that would bite your hands when you contact it. (26 b) leads us back to the examples in (19) about business transactions. In business transactions, such as purchasing, the norm is *yī-shǒu jiāo qián yi-shǒu jiāo huò* (one-hand hand-over money, one-hand hand-over goods). This idiom evokes the image where the buyer and seller simultaneously hand over the money and goods into each other's hands. That is the "fair play" in the business transaction; it is accomplished by hands. You pay money with your hands. If the price of the goods you want to buy is too high, it "bites" your hands. There is no doubt that the abstract reasoning via metaphor reflected in (25) and (26) is based on our tactile-kinesthetic experiences with our hands. When, in English, problems are said to be "thorny" or "knotty", it entails the same metaphorical conceptualization that problems are solved by hands rather than brains.

4. Conclusion

In this study I have demonstrated that the Chinese compounds discussed are formed via metaphor and metonymy grounded in our immediate bodily experiences with hands. In this sense, meaning can be said to be the extension of bodily experiences through human imagination structured by metaphor and metonymy, as Vico ([1744] 1968) argued over 200 years ago (see also Danesi 1993). This study supports the claim that our living body has served as a semantic template in the evolution of our language and thought (Sheets-Johnstone 1990).

Some examples in this study involve metonymy only, while others involve only metaphor. But in most examples metonymy and metaphor interact and interplay in intricate ways for which Goossens (1995) coined the term "metaphtonymy". In many cases, metonymy may be the initial process through which the compounds are formed. However, these compounds have subsequently undergone metaphorical transformations that extend far beyond the prototypical meanings denoting various actions of hands. The metaphorical extension is a process of abstraction, but abstraction is embodied in the sense that it can be traced back to its root meaning of bodily activities with hands.

The commonalities between Chinese and English by far outweigh their differences. They share several conceptual metaphors and metonymies pertaining to the hand. Differences arise at the surface linguistic level.

The use of the hand may be explicit in one language but implicit in the other. For instance, "to release one's hand(s)" in Chinese is "to give up" in English. One language may use a different but related body part to express a concept. An example is the use of the hand in Chinese versus the finger, a subpart of the hand, in English. A thief has "sticky hands" in Chinese and "sticky fingers" in English. The two languages use the hand in somewhat different contexts to express the same or similar concepts. Thus, "tuck one's hands in sleeves" in Chinese and "put one's hands in pockets" in English both have the meaning "purposefully avoid getting involved". The similar expressions in these two languages may have slightly different senses. For instance, the Chinese equivalent to the English idiom "wash one's hands of…" has the sense of disengagement, but it primarily means "stop doing wrong or evil and reform oneself". These differences can be attributed to different "cultural preferences" (Kövecses and Radden 1998; Yu 1995, 1998). The commonalities, on the other hand, are rooted in the common knowledge about and bodily experiences with hands.

Finally, there is no doubt that much of language rests in the hands. According to gestural theories, the use of the body, and especially of the hands, to refer to objects, beings and events in the immediate environment, and furthermore, to refer to abstract notions, ideas and affective states, was the protoform of communication and language (Danesi 1993). Gestures are an integral part of language, presenting thought in action and revealing a new dimension of the mind (McNeill 1992). More generally, it has been argued in various fields that the mind itself is the extension of the body and that meaning and thinking are modeled on the body (e. g., Danesi 1993; Johnson 1987; Shapiro 1985; Sheets-Johnstone 1990). It is time to give the body its due (Sheets-Johnstone 1992) and to put the body back in the mind (Johnson 1987). Cognitive semantics contributes to this project by bringing to light the linguistic evidence for embodied cognition.

Appendix: The Character Version of the Chinese Examples

(1) 眼高手低 (2) 有些领导嘴硬手软。(3) 两手抓，两手都要硬。[扳手, 扶手] (4) a. 高手 b. 低手 c. 硬手 d. 好手 e. 能手 f. 妙手 g. 里手 [高足] (5) a. 对手 b. 敌手 c. 国手 [交手, 出手, 还手, 平手, 国脚] (6) a. 助手 b. 帮手 c. 副手 d. 二手 e. 下手 f. 左右手 (7) a. 黑手 b. 打手 c. 扒手 d. 旗手 e. 舵手 (8) a. 手段 b. 手法 c. 手腕 d. 手笔 [铁腕, 铁腕手段] (9) a. 手头 b. 手面 (10) a. 他手头比过去宽多了。 b. 你手面太阔了，要节约一点才好。(11) a. 手心 b. 手下 (12) a. 手痒 b. 手黏 c. 手长 d. 手短 e. 手软 f. 手黑 g. 手辣 h. 手松 i. 手紧 j. 手大 (13) 拿了人家的手短，吃了人家的嘴软。[心狠手黑，心毒手辣, 大手大脚] (14) a. 动手 b. 着手 c. 入手 d. 下手 e. 上手 f. 开手 (15) a. 我们应立即着手制定计划。早点儿动手，早点儿完成。b. 我完全不了解情况，无从下手。c. 解决问题要从调查研究入手。(16) a. 插手 b. 沾手 c. 搭手 d. 累手 (17) a. 住手 b. 歇手 c. 罢手 d. 丢手 e. 撂手 f. 撒手 g. 甩手 h. 抖手 i. 洗手 j. 了手 k. 收手 (18) a. 接手 b. 经手 c. 过手 (19) a. 倒手 b. 转手 c. 易手 d. 到手 e. 脱手 f. 出手 g. 抢手 [出手大, 抢手货, 二手货] (20) a. 伸手 b. 缩手 c. 袖手 d. 垂手 e. 反手 f. 拱手 g. 抬手 h. 放手 [伸手要官, 伸手要权, 缩脚, 缩手缩脚, 袖手旁观, 垂手可得, 垂手可成, 反手可得, 拱手让人, 高抬贵手] (21) a. 我们信得过你，你就放手干吧。b. 我不愿就此放手、离开我喜爱的滑冰。(22) a. 拿手 b. 得手 c. 应手 d. 顺手 e. 随手 f. 碍手 g. 束手 [拿手好戏, 碍手碍脚, 束手束脚, 束手无策] (23) a. 赤手 b. 空手 c. 白手 d. 信手 e. 一手 f. 双手 g. 假手 [赤手空拳, 空手而归, 白手起家, 信手挥霍, 一手包办, 一手遮天, 有一手, 露一手, 留一手, 双手捧上, 双手赞成, 假手于人] (24) a. 携手 b. 连手 c. 联手 d. 合手 e. 勾手 f. 分手 [携手并肩, 连手合作] (25) a. 缠手 b. 绕手 c. 烫手 d. 棘手 e. 扎手 f. 辣手 g. 咬手 (26) a. 这件事以前没干过，刚接触有点咬手。b. 这种东西成套地买价钱太咬手，还是零买吧。[一手交钱一手交货]

Notes

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1. The English examples cited are taken either from English dictionaries or from Kövecses and Szabó (1996), which contains a section devoted to the English idioms involving the body-part term *hand.* Some of the conceptual metonymies and metaphors discussed in this paper are also taken from there.
2. In collecting the Chinese data I used the following dictionaries in China: Lü and Ding (1980, 1989), Wei (1995), and Wu (1993). In the lexical examples, the

parentheses contain glosses. Some examples are marked as "dialectal" (*dial.*) in the dictionaries. A character version of the Chinese examples is provided in the appendix, numbered as they are in the main text. The square brackets there contain expressions that occur unnumbered within the text.

3. Verbals here include adjectivals, also referred to as stative verbals in Chinese.
4. Another metonymy of this kind very common in Chinese, as well as in English, is THE FACE STANDS FOR THE PERSON, which I have discussed in detail elsewhere (Yu 2001). The bodily basis for this metonymy is that the face, with eyes, nose and mouth on its front and ears to its sides, is the most distinctive part of a person. See, also, Ukosakul (this volume) for a discussion of its manifestation in Thai.
5. Here I use the term "object" in a loose sense, because the verbs may not always be transitive, but may include some that are unaccusative in nature. That is to say, the nouns following these verbs may not necessarily be their direct objects.

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What cognitive linguistics can reveal about complementation in non-IE languages: Case studies from Japanese and Korean

Kaoru Horie

1. Introduction[1]

Complementation, "the syntactic situation which arises when a notional sentence or predication is an argument of a predicate" (Noonan 1985: 84), is a recognizably very complex syntax-semantics phenomenon exhibiting considerable typological diversity (see Noonan 1985, Givón 1990, Dixon 1995, Horie, 2001). As such, even between two languages sharing remarkably similar typological profiles such as Japanese and Korean, complementation offers a tantalizing descriptive challenge to linguists seeking to identify the extent of similarities and differences between the two languages. Previous studies comparing Japanese and Korean complementation (e. g. Song 1981) thus fail to correctly capture the nature of the contrast in form-meaning correspondence exhibited by the complement systems of these respective languages.

This paper seeks to account for similarities and differences in the complement systems of Japanese and Korean from a broadly conceived Cognitive Linguistic viewpoint, enriched by the findings of Linguistic Typology, particularly Hawkins theory of Comparative Typology (Hawkins 1986). The organization of the paper is as follows: Section 2 offers a brief description of Japanese and Korean complementation; section 3 explores similarities in form-meaning correspondence between Japanese and Korean complementation from a cognitive linguistic viewpoint; section 4 probes into some fundamental differences between the complement systems of the respective languages from a comparative typological perspective; section 5 presents the conclusion.

2. Japanese and Korean complementation: a brief outline

Japanese and Korean, which arguably belong to the same Altaic family of languages, share a remarkable similarity in grammatical structure, e. g. both exhibit SOV word order, both employ agglutinating morphology,

both have a case-marking system and both overtly indicate subject honorification. Included among these grammatical features is the extensive use of nominalization in marking subordinate clauses in general. In Japanese and Korean, the majority of complement clauses and some of the adverbial clauses are nominalized embedded clauses.[2] Examples (1 a) to (2 b) respectively include embedded nominalized clauses. These examples illustrate the extent to which nominalization is involved in the formation of subordinate clauses in Japanese and Korean. Nominalizers are indicated in bold.

Complement clauses

(Japanese)

(1) a. *[Yuube ame-ga hut-ta]* ***koto****-o* *sit-ta.*
last night rain-NOM[3] fall-PAST NOML-ACC learn:GER-PAST
'I learned that it had rained last night.'

(Korean)

b. *[Eceyspam pi-ka nayli-n* ***kes****-ul* *al-ass-ta.*
last night rain-NOM fall-ADN:PAST NOML-ACC know-PAST-DECL
'I learned that it had rained last night.'

Adverbial clauses

(Japanese)

(2) a. *[Yuube ame-ga hut-ta]* ***no*** *de,* *zimen-ga*
last night rain-NOM fall-PAST NOML-LOC ground-NOM
nurete iru.
become wet:GER exist
'Because it rained last night, the ground is wet.'

(Korean)

b. *[Eceyspam pi-ka nayly-ess]-**um** ulo,* *cimyen-i*
last night rain-NOM fall-PAST-NOML:LOC ground-NOM
cece issta.
become wet:CONJ exist:DECL
'Because it rained last night, the ground is wet.'

Table 1 presents a list of nominalizing and non-nominalizing complementizers in Japanese and Korean (see Horie 2000a):

Table 1. Complementizers in Japanese and Korean

	nominalizing	non-nominalizing
Japanese:	*koto, no, tokoro*	*to*
Korean:	*kes, ki, (u)m*	*ko*

Nominalized and non-nominalized complement clauses are distinguishable in terms of whether or not the clause in question can be marked by a case-particle, which regularly marks a noun or noun phrase (unless omitted), as illustrated in Figure 1:

(A) Nominalized complement: [S' Ad Pred] NOML-(Case particle)
(B) Non-nominalized complement: [S' Pred] COMP-(*Case particle)

Figure 1. Internal structures of Japanese and Korean complement clauses ('Ad Pred' stands for 'Adnominal Predicate Form')

The syntactic contrast between these two types of complements is illustrated by the following Korean examples in (3) and (4).

(3) *Mary-nun [eceyspam pi-ka nayli-n]* ***kes-ul***
TOP last night rain-NOM fall-ADN:PAST NOML-ACC
al-ass-ta.
know-PAST-DEC
'Mary learned that it rained last night.'

(4) *Mary-nun [eceyspam pi-ka nayly-ess-ta]****-ko(*-lul)***
TOP last night rain-NOM fall-PAST-DECL-COMP (ACC)
sayngkakha-n-ta.
think-PRES-DECL
'Mary thinks that it rained last night.'

The next two sections respectively explore similarities and differences between complement systems of Japanese and Korean more closely from cognitive and typological viewpoints.

3. Similarities in form-meaning correspondence between Japanese and Korean complementation: iconicity and grammaticalization

This section explores the extent to which Japanese and Korean complementation exhibit similar patterns of form-meaning correspondence from a cognitive linguistic viewpoint, particularly from the perspectives of Iconicity and Grammaticalization.

3.1. Iconic basis of Japanese and Korean complementation

Iconicity, "a consistent isomorphism between the syntactic code and its semantic or pragmatic designatum" (Givón 1990: 945), is one of the highly useful explanatory tools of Cognitive Linguistics. The concept has been refined by John Haiman (Haiman 1983, 1985 a,b), and it has been applied to an explanation of cross-linguistically observed form-meaning correspondence in complementation by Talmy Givón (1980, 1990).

Givón (1980) argues that there exists a cross-linguistically observed isomorphic correlation between the form of a complement and the meaning it encodes, and refers to the correlation as a "binding hierarchy". The gist of the binding hierarchy is that the greater or lesser force exerted by the agent of the matrix clause over the agent of the complement clause, which Givón calls "binding", iconically correlates with the greater or lesser morpho-syntactic restrictions (notably the degree of "finiteness") imposed on the complement clause. The complement-taking matrix verbs are thus arranged on the "binding hierarchy" from those encoding the stronger binding force, i. e. "manipulative verbs" (e. g. equivalents to English *make*, *cause*) and "modality verbs" (e. g. equivalents to English *begin*, *succeed*), to those encoding the weaker binding force, i. e. "cognition-utterance verbs" (e. g. equivalents to English *know*, *say*), with verbs encoding various intermediate degrees of semantic binding, e. g. verbs of emotional involvement (equivalents to English *hope*, *want*) plotted in between. The major semantic difference between "manipulative verbs" and "modality verbs" is whether the matrix agent's action is directed toward the complement event/state ("modality verbs") or toward the agent of the complement clause ("manipulative verbs").

Generally speaking, Givón's binding hierarchy makes correct predictions about the form-meaning correspondences shown by Japanese and Korean complementation. In the case of manipulative verbal suffixes, i. e. Japanese *-(s)ase-* and Korean *-key ha-*, it is not even clear whether a sequence of the manipulated noun phrase and the verb stem (indicated by square brackets below) can be identified as an instance of a "complement clause":

Manipulative verbs
(Japanese)

(5) a. *Hanako-wa [Taroo-{*ga/o/ni} ik]-ase-ta.*
TOP NOM/ACC/DAT go-CAUS-PAST
'Hanako made (or let) Taro go.'

(Korean)

b. *Hanako-nun [Taroo-{*ka/lul/eykey} ka]-key hay-ss-ta.*
TOP NOM/ACC/DAT go-CAUS-PAST-DECL
'Hanako made (or let) Taro go.'

(Japanese)

(6) a. *Hanako-wa [Taroo-{*ga/*o/ni} hon-o kaw]-ase-ta.*
TOP NOM/ACC/DAT book-ACC buy-CAUS-PAST
'Hanako made (or let) buy the book.'

(Korean)

b. *Hanako-nun [Taroo-{*ka/*lul/eykey} chayk-ul*
TOP NOM/ACC/DAT book-ACC
sa]-key hay-ss-ta.
buy-CAUS-PAST-DECL
'Hanako made (or let) Taro buy the book.'

To begin, we note that there are several clear indications of the strong semantic binding force characteristic of manipulative verbs, e. g. their effect on case-marking and predicate raising. As shown in (5 a) through (6 b), nominative case-marking, an indication of the presence of the prototypical matrix agent noun phrase, is not available for marking the manipulated noun phrase. Instead, the manipulated noun phrase is marked by a dative and/or accusative, depending on the valency of the verb under causativization. Where the manipulated noun phrase is predicated by an intransitive verb as in (5 a) and (5 b), either accusative or dative case-marking is available, because neither case is already taken by any noun phrase in the sentence. As pointed out by Shibatani (1975) and Miyagawa (1989), accusative-marking of the manipulated noun phrase indicates the lesser control retained by the manipulated, whereas dative-marking signals greater control. Concomitantly, the manipulative verbal suffixes *-(s)ase-* and *-key ha-* are directly attached to main verbs, a morpho-syntactic situation similar to so-called "predicate raising" such as the English *let go (of)*.

Complement clauses of "modality verbs" in Japanese and Korean are comparatively easy to identify, though they also show indications of strong semantic binding in that the nominalized complement verb forms *yomi* in (7 a) and *ilk-ki* in (7 b), lack independent tense-aspect-modality marking:

Modality verbs

(Japanese)

(7) a. *Hanako-wa [hon-o yomi] hazime-ta.*
TOP book-ACC read:NOML begin-PAST
'Hanako began to read a book.'

(Korean)

b. *Hanako-nun [chayk-ul ilk-ki] sicakhay-ss-ta.*
TOP book-ACC read-NOML begin-PAST-DECL
'Hanako began to read a book.'

In contrast to these verbs, complement clauses of "cognition-utterance" verbs occupy the lowest end of the semantic binding scale, they are thus allowed greater morpho-syntactic and pragmatic independence, for example the agent noun phrase receives nominative case-marking, whereas the complement predicate retains independent aspect, tense, modality and formality marking and takes an agent noun phrase highlighted as the topic of the sentence.

Cognition-perception verb complements are allowed to carry independent aspect-marking, typically imperfective aspect, though the perfective aspect is acceptable when contextually compatible:

Cognition-perception verbs

(Japanese)

(8) a. *Hanako-wa [Taroo-ga sono hon-o {kau/katta}]*
TOP NOM that book-ACC buy:IMPERF/buy:PERF
no-o mi-ta.
NOML-ACC see-PAST
'Hanako saw Taro buy a book/Hanako saw Taro as he bought a book.'

(Korean)

b. *Hanako-nun [Taroo-ka ku chayk-ul {sanun/san}]*
TOP NOM that book-ACC buy:IMPERF/buy:PERF
kes-ul po-ass-ta.
NOML-ACC see-PAST-DECL
'Hanako saw Taro buy a book/Hanako saw Taro as he bought a book.'

Factive cognition verb complements are allowed future or past tense marking relative to the tense of the matrix clauses:

Factive cognition verbs

(Japanese)

(9) a. *Hanako-wa [Taroo-ga hon-o {kau/katta}]*
TOP NOM book-ACC buy:PRES/buy:PAST
koto-o sit-ta.
NOML-ACC learn-PAST
'Hanako learned that Taro {would buy/bought} the book.'

(Korean)

b. *Hanako-nun [Taroo-ka chayk-ul {sal/san}]*
TOP NOM book-ACC buy:FUT/buy:PAST
kes-ul al-ass-ta.
NOML-ACC learn-PAST-DECL
'Hanako learned that Taro {would buy/bought} the book.'

Cognition-perception verb complements and factive cognition verb complements are marked by the nominalizing complementizers discussed in Section 2, i. e. *no* in (8 a), *koto* in (9 a), and *kes* in (8 b) and (9 b). Note that, in addition to independent aspect or relative tense-marking, cognition-perception verb complements (8 a, b) and factive cognition verb complements (9 a, b) are allowed to have nominative-marked subjects, an option not allowed in complements of manipulative verbs (6 a, b) or modality verbs (7 a, b).

Non-factive cognition verb and utterance verb complements, which are commonly marked by non-nominalizing complementizers (i. e. *to* in Japanese and *ko* in Korean; cf. Section 2), are allowed even greater syntactic and pragmatic independence than cognition-perception and factive verb complements. As shown in (10 a) to (11 b), they are capable of encoding modality (e. g. epistemic modality), as in (10 a) and (10 b), and even the formality of the speech situation (i. e. politeness toward addressee), as in (11 a) and (11 b). This latter grammatical category has no grammatical equivalent in English:

Non-factive cognition verbs

(Japanese)

(10) a. *Hanako-wa [Taroo-{ga/wa} sono hon-o kat-ta*
TOP NOM/TOP that book-ACC buy-PAST
daroo] to omot-ta.
EPIST MOD QUOT think-PAST
'Hanako thought that, {Taro/as for Taro, he} probably bought that book.'

(Korean)

b. *Hanako-nun [Taroo-{ka/nun} ku chayk-ul*
TOP NOM/TOP that book-ACC
sa-ss-ul kes -i-la] -ko sayngkakhay-ss-ta.
buy-PAST-ADN:FUT-NOML-COP-QUOT think-PAST-DECL
'Hanako thought that, {Taro/as for Taro, he} probably bought that book.'

Non-factive utterance verbs

(Japanese)

(11) a. *[Taroo-wa sono hon-o tasikani kai-masi-ta]-to*
TOP that book-ACC surely buy-POL-PAST-COMP
Hanako-wa it-ta.
TOP say-PAST
'"Taro certainly bought that book", said Hanako.' (the speaker shows politeness toward the addressee)

(Korean)

b. *[Taroo-nun ku chayk-ul hwaksilhi sa-ss-supnita]*
TOP that book-ACC surely buy-PAST-POL:DECL
lako Hanako-nun malhay-ss-ta.
COMP TOP say-PAST-DECL
'"Taro certainly bought that book", said Hanako.' (the speaker shows politeness toward the addressee)

Furthermore, as shown in (11) and (11), an agent noun phrase in non-factive cognition verb complements can be marked by the topic-marking particle (Japanese *wa* and Korean *nun/un*) as well as by the nominative case particle (Japanese *ga* and Korean *ka/i*). Availability of topic-marking of the agent noun phrase in (11a) and (11b) is closely related to the fact that the entire complement clauses, unlike their counterparts in (8 a) to (9 b), lack nominalization and behave similarly to matrix clauses. In fact, topic markers are not available in nominalized complement clauses in (9 a) and (9 b), as shown in (12 a) and (12 b):

(Japanese)

(12) a. **Hanako-wa [Taroo-wa hon-o kat-ta] koto-o*
TOP TOP buy-ACC buy-PAST NOML-ACC
sit-ta.
learn-PAST
'*I learned that as for Taro, he bought that book.'

(Korean)

b. **Hanako-nun [Taroo-nun chayk-ul san] kes-ul*
TOP TOP book-ACC buy:PAST NOML-ACC
al-ass-ta.
learn-PAST-DECL
'*I learned that as for Taro, he bought that book.'

Japanese and Korean complementation are thus seen to follow Givón's binding hierarchy and manifest similar patterns of form-meaning correspondence sensitive to the degree of influence exerted by the matrix agent on the complement agent.

3.2. Grammaticalization of complementizers in Japanese and Korean

Grammaticalization, "that subset of linguistic changes through which a lexical item in certain uses becomes a grammatical item, or through which a grammatical item becomes more grammatical" (Hopper and Traugott 1993: 2), is another highly useful explanatory tool in Cognitive Linguistics that has received intense scholarly attention (Heine, Claudi and Hünnemeyer 1991, Traugott and Heine 1991, Bybee, Perkins and Pagliuca 1994, Lehmann 1995, Ohori 1998, Ramat and Hopper 1998, Wischer and Diewald 2002). Studies of grammaticalization have uncovered various cross-linguistically observed patterns of development that lexical items undergo to acquire grammatical meaning. The classes of grammatical items thus emerging through the process of grammaticalization include tense-aspect-modality auxiliaries, conjunctions, adpositions, and complementizers. It also occurs in Yuman and Uto-Aztecan language families in the Americas (see Munro 1978; Casad 1992).

The grammaticalization of complementizers has been studied rather intensely by functional-typological linguists like Evelyn Ransom, Zygmunt Frajzyngier, and Carol Lord (Ransom 1988, Frajzyngier 1991, Lord 1993). Complementizers are known to have evolved from other grammatical words such as demonstrative pronouns, conjunctions, adpositions or case-markers, or from lexical words such as nouns and verbs. Japanese and Korean show similar patterns of developing complementizers from lexical nouns with highly generalized meaning, i. e. Japanese *koto* ("matter, proposition") and Korean *kes* ("thing, matter") (see also Ransom (1988) for an analysis of the grammaticalization of Korean *kes*) as in (13 a) and (13 b):

(Japanese)
(13) a. *[Sono otoko-ga uso-o tuita] koto-ga*
that man-NOM lie-ACC tell:GER NOML-NOM
hanmeisi-ta.
become obvious:PAST
'It became obvious that the man told a lie.'

(Korean)

b. *[Ku namca-ka kecismal-ul ha-n] kes-i*
that man-NOM lie-ACC tell-ADN:PAST NOML-NOM
phanmyengtway-ss-ta.
become obvious-PAST-DECL
'It became obvious that the man told a lie.'

Grammaticalization studies (e. g. Lord 1993) have uncovered a grammaticalization path from the *say*-verb to a marker of verb complementation, as shown by (14) from the West African language Ewe. This phenomenon is common in South-East Asian, South Asian and African languages.

(14) *me-dí bé mafle awua ḍewó*
I-want (say) I-SUBJ-buy dress some
'I want to buy some dresses.'
(Lord 1993: 186)

Japanese and Korean manifest a similar grammaticalization pattern of the *say*-verb as a generalized noun complement marker (cf. Terakura 1981 for a discussion of the complementizer *to iu* in Japanese). Examples (15 a) and (15 b) show a similar pattern wherein quotative complementizers *to* and *ko* and *say*-verbs *iu* and *ha-nun* in Japanese and Korean coalesce into single noun-complement markers.

(Japanese)

(15) a. *[Gaimu daizin-ga zininsita] to iu hoodoo-wa*
foreign minister-NOM resign:PAST QUOT say report-TOP
zizitumukon dat-ta.
false statement COP-PAST
'The report that a foreign minister resigned was not true.'

(Korean)

b. *[Oymwutaysin-i saimhayssta] ko ha-nun*
foreign minister-NOM resign:PAST:DECL QUOT say-ADN:PRESS
poto-nun sasilmwukun-i-ess-ta.
report-TOP false statement-COP-PAST-DECL
'The report that a foreign minister resigned was not true.'

Crucially, noun complement markers *to iu* and *ko ha nun*, once grammaticalized, can participate in the verb complementation of the respective languages by modifying nominalizing complementizers, i. e. Japanese *no*, *koto*, and Korean *kes*, as shown in (16 a) and (16 b):

(Japanese)

(16) a. *[Gaimu daizin-ga zininsita] {to iu koto/to iu no}-wa*
foreign minister-NOM resign:PAST COMP/COMP-TOP
hizyooni zyuudaina zitai da.
very grave matter COP
'It is a very serous matter that the foreign minister allegedly resigned.'

(Korean)

b. *[Oymwutaysin-i saimhayssta] ko ha-nun*
foreign minister-NOM resign:PAST:DECL QUOT do-ADN:PRES
kes-un acwu simkakhan sathay-i-ta.
NOML-TOP very gave:ADN matter-COP-DECL
'It is a very serous matter that the foreign minister allegedly resigned.'

To iu no/koto and *ko ha nun kes* usually carry with them an implication that the speaker has some reservations about the truthfulness of the proposition expressed in the complement. This semantic characteristic of *to iu no/koto* and *ko ha-nun kes* is a natural consequence of the fact that they include *say*-verbs, i. e. *iu* and *ha-nun*, that are typically used to report someone else's speech. These complementizers thus normally relieve the speaker of the responsibility for the truthfulness of the proposition reported, as illustrated in (17 a) and (17 b):

(17) a. *[Gaimu daizin-ga zininsita] {to iu koto/to iu no}-wa, mosi*
foreign minister-NOM resign:PAST COMP/COMP-TOP if
hontoo nara, hizyooni zyuudaina zitai da.
be true if very grave matter COP
'That the foreign minister allegedly resigned, if true, is a very serious matter.'

b. *[Oymwutaysin-i saimhayssta] ko ha-nun*
foreign minister-NOM resign:PAST:DECL QUOT do-ADN:PRES
kes-un cengmal-ilamyen acwu simkakhan sathay-i-ta.
NOML-TOP be true-COP:IF very grave:ADN matter-COP-DECL
'That the foreign minister allegedly resigned, if true, is a very serious matter.'

This section has demonstrated the usefulness of the two explanatory principles incorporated into Cognitive Linguistics, i. e. the binding hierarchy and the role of grammaticalization, in exploring similarities in form-

meaning correspondence between Japanese and Korean complementation. The next section shifts attention to differences between Japanese and Korean complementation and argues for a need to incorporate the findings of Linguistic Typology and thereby supplement Cognitive Linguistic explanations.[4]

4. Where Japanese and Korean complementation differ: a comparative-typological approach

This section delves into subtle yet consistent differences in form-meaning correspondence between Japanese and Korean complementation from the perspective of Linguistic Typology.

Cognitive Linguistics certainly provides useful tools in capturing cross-linguistic similarities, as demonstrated in Section 3. It also excels in highlighting differences between languages of very different typological profiles, as convincingly proven by cognitive typological parameters such as "satellite-framed languages" vs. "verb-framed" languages (see Talmy 1985, 1991, Slobin 1996). The distinction is eloquently summarized in the following quotations:

> One way of expressing the framing function of PATH is through the verb', as in Fr. *entrer* and Sp.*entrar*. In view of this, French and Spanish can be called **verb-framed languages** (Talmy 1985, 1991). Conversely, *PATH* can be rendered by a particle, as in E. *go into*, or by a verbal prefix, as in G. *hineingehen*. To capture the common function of these last two elements they have been subsumed in one grammatical category by Talmy, labeled 'satellites'. Hence, English and German can be called **satellite-framed languages**. (Ungerer and Schmid 1995: 237)

When analyzing rather subtle differences between languages of similar typological profiles such as Japanese and Korean, however, certain kinds of cognitive typological explanations are not sufficient in themselves. For instance, the previously proposed cognitive typological parameters such as "satellite-framed languages vs. verb-framed languages" lose their explanatory appeal here since both Japanese and Korean are grouped in the same semantic types of languages, e. g. verb-framed-languages.

Furthermore, ordinary typological parameters such as word order and case-marking typologies also fail to recognize cross-linguistic differences between these two languages because they both belong to the limited

group of languages which are "SOV" and hence are said to have a "nominative-accusative" case-marking system. In fact, structural similarities between the two languages are such that they even share some grammatical features not commonly observed among other languages of the world, e. g. subject honorific verbal suffixes and addressee-oriented politeness verbal suffixes. However, Japanese and Korean grammars manifest subtle yet consistent differences, which can be captured only through a sophisticated analytical framework designed to reveal cross-linguistically differing form-meaning correspondence patterns. Such an analytical framework is provided by Hawkins' theory of Comparative Typology (Hawkins 1986).

One of the most important claims of Comparative Typology is that languages differ in terms of how closely surface grammatical structures (forms) and semantic structures (meanings) match. English represents languages that allow for polysemy and surface structural ambiguity, while German is a language where form-meaning mapping is rigid and straightforward. Hawkins' Comparative Typology opens up a new venue of research which makes possible a fine-grained comparison between two languages of varying typological affinity: English and German, or Japanese and Korean. Inspired by Hawkins' Comparative Typology, Horie (2000b) explores differing semantic orientations of Japanese and Korean complementation from a cognitive and typological perspective. The major findings of my previous study are summarized as follows:

(i) Japanese complementation: prioritizes the semantic distinction between "concrete" and "abstract" by employing two sentential nominalizers *no* and *koto* that respectively encode each of these semantic values. In contrast, the semantic distinction between "realis" and "irrealis" is not manifested;
(ii) Korean complementation: prioritizes the semantic distinction between "realis" and "irrelais" by employing two sentential nominalizers *(u)m* and *ki* that respectively encode each of these semantic values. In contrast, the semantic distinction between "concrete" and "abstract" is not manifested.

The remainder of this section will concentrate on differing manifestations of finiteness in Japanese and Korean complementation and the concomitant differences in the complement systems of Japanese and Korean.

4.1. Differing manifestations of finiteness in Japanese and Korean complementation

The notion of finiteness is crucial in explaining the form-meaning correspondences observed in complementation, as shown by the following quotation from Givón (1990: 549):

> The third syntactic component used in coding the complementation scale is verb morphology, where one may observe a scale between the most **finite** form – prototype verb, and the most **non-finite** form – closets (sic) to the prototype noun. (…) The **nominality** – or **non-finiteness** – of a verbal form is coded syntactically through a number of devices, three of which concern us here:
>
> (75) a. Derived *nominal* form of the verb
> b. Reduction of *finite* tense-aspect-modality marking
> c. Reduction of *pronominal agreement*

The notions of finiteness and non-finiteness were originally proposed based on well-known European languages such as Latin, English, and French. The typical definitions of "finite" and "infinitive" verb forms, which are shared by the majority of European languages, are as follows:

> **finite verb form** [Lat. *finitus* 'bounded']
> Conjugated verb form marked according to **tense**, **voice**, **person**, **number**, and **mood**: *She eats* vs. the non-finite forms (*to*) *eat* (Bussmann 1996: 166)
> **infinitive** [Lat. *infinitivus* 'having no limits,' 'not specified']
> Nominal verb form which has functional and formal properties of both nouns and verbs: verbal properties are **government** (*the reading of the book*), **aspect** (*to read* vs *to have read*), **voice** (*to read* vs *to be read*); because of its nominal properties, the verbal categories **person** and **number** are lost. In addition, infinitives can be used as nouns, i. e. in the syntactic function of a noun phrase (e. g. *To eat is to live*). (Bussmann 1996: 229).

These notions can thus be straightforwardly incorporated into cognitive linguistic analyses of complementation phenomena in European languages such as English and French, as stated in the following quotations:

> (…) *the viewing frame serves as a window on the situation described by a finite clause* (Langacker 1991: 441) [emphasis added]
> In a nutshell, *infinitival complements reflect a subjective construal of the complement clause*, that is to say that the subordinate clause is construed internally, from the vantage point of the subordinate subject. *A finite clause on*

> *the other hand is the sign of an objective construal of the complement scene* (from the vantage point of C_1). (Achard 1998: 69) [emphasis added][5]

The closest equivalent to the finite/non-finite distinction in Japanese and Korean is the distinction between sentence-final predicate forms and adnominal predicate forms. A sentence-final predicate form is a predicate complex consisting of a matrix predicate and a predicate suffix (or set of suffixes), which signals the completion of the sentence. An adnominal (attributive) predicate form is a predicate complex indicating that it is followed by a nominal head, as illustrated in Figure 2:

[Pred Sentence-final predicate form].
[Pred Adnominal predicate form] [Nominal head]

Figure 2. Functions of sentence-final predicate form and adnominal predicate form

Sentence-final predicate forms can encode absolute tense and can include morphemes signalling the speaker's assessment of the information authorship relative to the addressee. In (16 a) and (16 b), Japanese and Korean sentence-final predicate forms include past tense suffixes *da* (phonological variant of *ta*) and *-ess-*, both of which indicate absolute tense. They can also include the sentence-final morphemes *ne* and *-ci*, which indicate the speaker's ascertainment of the information shared by the addressee:

(Japanese)
(18) a. *Sono hon-o yon-da-ne.*
that book-ACC read-PAST-SFP
'(I have reason to believe that) you have read that book, am I correct?'
(Korean)
b. *Ku chayk-ul ilk-ess-ci.*
that book-ACC read-PAST-SFP
'(I have reason to believe that) you have read that book, am I correct?'

In contrast, adnominal predicate forms can only encode relative tense, the interpretation of which is dependent on the absolute tense of the matrix clause. Furthermore, adnominal predicate forms cannot include morphemes which signal the speaker's assessment of the authorship of

the information conveyed relative to the addressee, as illustrated in (19 a) and (19 b):

(Japanese)
(19) a. *[Kimi-ga sono hon-o yon-da (*ne)] koto-o*
you-NOM that book-ACC read-PAST-SFP NOML-ACC
wasurete-ita.
forget:GER-exist
'I forgot that you had read that book (*right?).'
(Korean)
b. *[Ney-ka ku chayk-ul ilk-un-(****ci***)] kes-ul ic-ko*
you-NOM that book-ACC read-PAST-SFP NOML-ACC forget-GER
iss-ess-ta.
exist-PAST-DECL
'I forgot that you had read that book (*right?).'

Tables 2 and 3 illustrate the distinction between predicate suffixes used in sentence-final predicate forms and those used in adnominal predicate forms in Japanese and Korean:

Table 2. Predicate suffixes used in Japanese sentence-final and adnominal predicate forms

(Suffixes used in sentence-final predicate forms)		
	Nonpast	Past
Verb	*-(r)u*	*-ta*
Adjective	*-i*	*-katta*
Nominal adjective	***-da****/-dearu*	*-datta*
Copula	***-da****/-dearu*	*-datta*
(Suffixes used in adnominal predicate forms)		
	Nonpast	Past
Verb	*-(r)u*	*-ta*
Adjective	*-i*	*-katta*
Nominal adjective	***-na****/-dearu*	*-datta*
Copula	***-no****/-dearu*	*-datta*

A comparison of Tables 2 and 3 reveals remarkable cross-linguistic differences between the two languages in terms of the extent to which sentence-final predicate forms and adnominal predicate forms are formally distinguished. As shown in Table 2, Japanese largely neutralizes the distinction

Table 3. Predicate suffixes used in Korean sentence-final and adnominal predicate forms (based on Umeda 1991)

(Suffixes used in sentence-final predicate forms)				
	Realis Present	Past	Remote Past	Irrealis Intention/Prediction
Verb	*-n-*	*-ess-*	*-ess ess-*	*-keyss-*
Adjective	zero	*-ess-*	*-ess ess-*	*-keyss-*
Existential predicate	zero	*-ess-*	(nonexistent)	*-keyss-*
Copula	zero	*-ess-*	*-ess ess-*	*-keyss-*
(Suffixes used in adnominal predicate forms)				
	Realis Present	Past		Irrealis Future/Probability
Verb	*-nun*	*-(u)n* (Perfective) -ten (Imperfective) *-essten* (Past experience)		*-(u)l*
Existential predicate	*-nun*	*-ten* -essten		*-ul*
Adjective	*-(u)n*	*-ten* *-essten*		*-(u)l*
Copula		*-ten* -essten		*-l*

between suffixes used in sentence-final predicate forms and those used in adnominal predicate form except for a subset of non-past predicate suffixes (indicated in bold). In contrast, Table 3 shows that Korean consistently and rigidly distinguishes predicate suffixes used in sentence-final predicate forms from those used in adnominal predicate forms. Furthermore, Korean overtly distinguishes "realis" and "irrealis" tense/mood predicate suffixes, a semantic distinction which is not manifested in Japanese predicate suffix forms.[6]

The most representative sentence-final/adnominal distinction between the two languages is displayed by the sentence-final mood predicate suffix, which indicates declarative mood as well as plain speech style. This suffix is absent in Japanese, but present in Korean. In the Japanese example (20 a), the past tense verbal suffix *da* (the phonological variant of *ta*) occurs sentence-finally. In contrast, in the Korean example (20 b), the past tense verbal suffix *-ess-* cannot appear at the end of the sentence, but must be followed by a sentence-final mood suffix, e. g. *-ta*, which also signals plain speech style ('*' indicates that the absence of *-ta* leads to unacceptability):

(Japanese)
(20) a. *Kinoo* *sono* *hon-o* ***yon-da***.
yesterday that book-ACC read-PAST
'(I) read that book yesterday.'
(Korean)
b. *Ecey* *ku* *chayk-ul* ***ilk**-ess-{ta/* ϕ}*.
yesterday that book-ACC read-PAST-DECL
'(I) read that book yesterday.'

Compare the sentence-final predicate forms in (20 a) and (20 b) with their adnominal predicate counterparts in (21 a) and (21 b). Note that the Japanese sentence-final predicate form in (20 a) and its adnominal predicate counterpart in (21 a) are identical, i. e. *yon-da*. In contrast, the Korean sentence-final predicate form in (20 b), i. e. *ilk-ess-ta*, is different from its adnominal predicate counterpart, i. e. *ilk-un*, in (21 b).

(Japanese)
(21) a. *[Kinoo* *sono* *hon-o* ***yon-da**]* *koto-o*
yesterday that book-ACC read-PAST NOML-ACC
wasurete-i-ta.
forget:GER-exist-PAST
'I forgot that I had read that book.'
(Korean)
b. *[Ecey* *ku* *chayk-ul* ***ilk-un**]* *kes-ul* *ic-ko*
yesterday that book-ACC read-PAST NOML-ACC forget-GER
iss-ess-ta.
exist-PAST-DECL
'I forgot that I had read that book.'

That Korean distinguishes sentence-final and adnominal predicate forms more rigidly and consistently than does Japanese is not accidental. In fact, from a Comparative Typological perspective (Hawkins 1986), it is one manifestation of the differing form-meaning correspondence patterns between Japanese and Korean. As discussed in Horie (1998), Horie and Kang (2000), and Horie and Sassa (2000), multiple grammatical meanings tend to be merged into a common form in Japanese. *Yonda* in (20) and (21), which encodes both sentence-final and adnominal forms, confirms this tendency. In contrast, Korean tends to keep separate forms that encode different grammatical meanings (e. g. *ilk-ess-ta* in (20 b) and

ilk-un in (21 b)). Table 4 presents further instances of the cross-linguistic contrast:

Table 4. Differing form-meaning correspondence patterns in Korean and Japanese (Horie 1998, Horie and Kang, to appear, Horie and Sassa, to appear)

	Japanese	Korean
i) Surface syntactic structures that allow for two (or more) semantic interpretations	commonly attested	not very common
ii) Case-marking particles develop adverbial clause marking function	commonly attested	not very common
iii) Case particle conversion phenomena	commonly attested	les common

The differing manifestations of the sentence-final/adnominal distinction in Japanese and Korean, comparable at least partially to the finite/non-finite distinction in European languages, have significant consequences in the complementation systems of the two languages. Adnominal predicate forms in Japanese, which are largely non-distinct from their sentence-final predicate counterparts (see Table 2), can encode dual functions: they either modify a nominal head or serve as a nominal head by themselves. This functional duality of adnominal predicate forms in Japanese is illustrated in Figure 3:

(I) [S' Adnominal predicate form] [Nominal head]-Case Particle
(II) [S' Adnominal predicate form]](ø) -Case Particle

Figure 3. Dual functions of adnominal predicate forms in Japanese

The noun-modifying function of adnominal predicate forms ((I) in Figure 3) is in fact shared by both Japanese and Korean complementation, as shown by (A) in Figure 1, which is repeated below as Figure 4:

(A) Nominalized complement: [S' Ad Pred] NOML-(Case particle)
(B) Non-nominalized complement: [S' Pred] COMP-(*Case particle)

Figure 4. Internal structures of Japanese and Korean complement clauses ('Ad Pred' stands for 'Adnominal Predicate Form')

However, the sentence nominalizing function of adnominal predicate forms ((II) in Figure 3) does not exist as an option in Korean. As shown in (22), adnominal predicate forms in Korean must always be followed by an overt nominal head (cf. (A) in Figure 4):

(Korean)

(22) *[Ecey ku chayk-ul ilk-un] {kes/*ø}-ul ic-ko*
yesterday that book-ACC read-PAST NOML-ACC forget-GER
iss-ess-ta.
exist-PAST-DECL
'I forgot that I had read that book.'

In contrast to Korean, the sentence-nominalizing function of adnominal predicate forms ((II) in Figure 3) does exist as an option for encoding complementation in Japanese, as illustrated by examples (23) to (25) (cf. also Horie 1997, 1999).

In (23) to (25), the bracketed complement clauses are nominalized by clause-final adnominal predicate forms, *kaeru* in (23), *zaru* in (24), and *yobu* in (25), without overt nominal heads accompanying them. The nominal status of complement clauses in (23) to (25) is evidenced by the fact that they are immediately followed by case-particles. Note, however, that the combinations of case-particles and complement-taking predicates in (23) to (25) are conventionalized and respectively encode fixed idiomatic meaning (as indicated by italics in the translations). In (23), the combination of the nominative case-particle *ga* and predicate *ii* "be good" takes on a deontic modal meaning of suggestion. In (24), an archaic negative form *zaru*, the accusative case-particle *o*, and *e-nai*, the negative form of *eru* "to obtain", together become conventionalized in the sense of "have no alternative but to do X." In (25), the dative case-particle *ni* and predicate *husawasii* "be appropriate" become fixed in the sense of "be proper to do X."

(Japanese)

(23) *[Hayaku uti-ni kaeru](ø)* ***-ga ii****.*
promptly home-to return:ADN NOM good
'*I strongly suggest that* you go home soon.'

(24) *[Ika-zaru](ø) -o e-nai.*
go-NEG ACC obtain-NEG
'I *cannot but* go.'

(25) *Sonouti-wa [yasiki-to yobu] -ni husawasii.*
that house-TOP mansion-QUOT call DAT appropriate
'The house *deserves to* be called a mansion.'

Though this pattern of nominalization is by no means productive in Modern Japanese, it is responsible for creating a host of conventionalized idiomatic constructions, as shown in Table (5):

Table 5. Conventionalized idiomatic constructions in Japanese that lack Korean counterparts

(I) Bare nominalized complement clauses immediately followed by the dative case particle *ni:* [S'] ni-atai-suru (DAT-worth-do; 'is worth doing'), [S'] ni-husawasii (DAT-suitable; 'is suitable for (doing)'), [S'] ni-kagiru (DAT-limit; 'is best to do'), [S'] ni-itaru (DAT-reach; 'end up -ing'), [S'] ni-kawari-nai (DAT- change:INF-NEG; 'is bound to'), [S'] ni-kosita- koto-wa-nai (DAT-pass:PAST-thing-TOP-NEG; 'there is nothing like -ing'), [S'] ni-makaseru (DAT-leave; 'leave X happen'), [S'] ni-masaru (DAT-excel; 'is better than to do'), [S'] ni-tariru (DAT-suffice; 'is sufficient to do'), etc.
(II) Bare nominalized complement clauses immediately followed by the nominative case particle *ga* or the accusative case particle *o*: [S'] ga-ii (NOM-good; 'it is better to do'), [S'] ga-gotoku (NOM-like; 'like-ing'), [S'] o-e-nai (ACC-obtain-NEG; 'cannot help-ing'), [S'] o-mate-nai (ACC- wait-NEG; 'it goes without-ing'), etc.

The presence of nominalized complements of the structure (II) in Figure 3 in Japanese and their absence in Korean is again a natural consequence of the consistent cross-linguistic differences in form-meaning correspondence between the two languages. That is, Japanese allows one form (e. g. adnominal predicate form) to be assigned two meanings (e. g. "noun

Table 6. Complementation systems of Japanese and Korean in contrast

	Japanese	Korean
Complementation formed by:		
i) non-nominalizing complementizers: ((A) in Figure 1)	present	present
ii) overt nominalizing complementizers: ((B) in Figure 1)	present	present
iii) non-overt nominalizing complementizers: ((II) in Figure 3)	**present**	**absent**

modification" and "sentence nominalization"), whereas Korean respects the "one form, one meaning" principle more rigidly.

This section ends by showing the extent of similarity and difference in the complementation systems of Japanese and Korean as summarized in Table 6.

5. Conclusion

This paper critically examined the usefulness of Cognitive Linguistics in revealing cross-linguistic similarities between two non-Indo European languages, Japanese and Korean. It also argued for the need to incorporate the findings of Linguistic Typology, in particular an analytical framework proposed by Hawkins (1986) called Comparative Typology, in further explaining the subtle differences in form-meaning correspondence patterns between the complementation systems of the two languages. In conclusion, this paper has demonstrated the usefulness of research combining Cognitive and Typological explanations, and it is hoped that there will be further collaboration between these two important disciplines.

Notes

1. This is a thoroughly revised version of the paper presented at the theme session "Cognitive Linguistics and Non-Indo-European languages" of the 6th International Cognitive Linguistic Association at Stockholm University, Sweden, on July 13, 1999. I thank Andrew Barke, David R. Bogdan, Ronald Langacker, Kaori Taira, Masakazu Wako and particularly Gene Casad and Gary Palmer, for constructive criticism. The usual disclaimer applies. The research project underlying this study was supported in part by the Grant-in-Aid from the Ministry of Education, Science and Culture (No.13610648).
2. This brings these languages into a typological parallel with the Amerindian language Yaqui (Dedrick and Casad 1999: 379 ff).
3. The following abbreviations are used in the glosses: ACC (Accusative), ADN (Adnominal), CAUS (Causative), COM (Comitative), COMP (Complementizer), CONJ (Conjunctive), DAT (Dative), DECL (Declarative mood), EPIST MOD (Epistemic Modality), FUT (Future), GER (Gerund), IMPERF (Imperfective), INF (Infinitive), LOC (Locative), NEG (Negative), NOM (Nominative), NOML (Nominalizer), PERF (Perfective), POL (Addressee politeness), PRES (Present), QUOT (Quotative), SFP (Sentence Final Particle), SUBJ (Subjective), TOP (Topic). ':' indicates that multiple grammatical functions are fused into one morpheme. [S'] represents a bare nominalized complement clause.

4. See Croft (1999) for some possible venues of collaboration between Cognitive Linguistics and Linguistic Typology. In this connection, it is apt to note that the first conference on "Cognitive Typology" was held in April 2000 (University of Antwerp, Belgium) for the purpose of "[bringing] together researchers from the field of linguistic typology and from the domain of cognitive approaches to language (broadly defined) to reflect on how the typological and the cognitive enterprises in language research interrelate, what they have to offer each other, and/or how they can join forces in view of their shared goal of achieving an explanatory account of language." [Quoted from the conference announcement; October 21, 1999, Funknet]
5. C_1 indicates a subject/conceptualizer.
6. Horie (2000b) argued that the presence or absence of overt "realis" and "irrealis" predicate suffixes in Korean and Japanese correlates with the presence or absence of that semantic distinction in the complementation systems of the respective languages.

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Zibun reflexivization in Japanese: A Cognitive Grammar approach

Satoshi Uehara

1. Introduction*

Cognitive linguistic theories have developed a great deal in recent years and succeeded in explaining linguistic phenomena observed in many, mostly Indo-European, languages. Van Hoek's (1997) seminal work on anaphora in the Cognitive Grammar framework, for instance, as she herself notes, "has focused entirely on English" (228). The next step for such theories to take is to test their ability to account for a possibly vast range of cross-linguistic variations observed in genetically distant and/or typologically different languages. This is the theme of the current paper; it presents the result of a contrastive study on reflexivization phenomena in English and Japanese, with a focus on the usages of *zibun* reflexivization in Japanese written narrative discourse.

The goals of this paper are two-fold: 1) to define the differences between English reflexives and Japanese *zibun* reflexives, and 2) to find out whether van Hoek's Cognitive Grammar theory developed for the former can apply to the latter.

2. Japanese *zibun*-reflexivization

The reflexive form *zibun* in Japanese, as a close equivalent to the English reflexive form *oneself*, has been the object of much research, closely examined by many generative grammarians (Sawada 1993; Iida 1996, inter alia). More recently it has come under study by functionally/cognitively oriented linguists (Ohye 1975; Kuno 1978; Hirose and Kaga 1997). One use of *zibun* is shown in (1) below:

(1) *Ken wa zibun o seme-ta.*
Ken_i TOP self_i ACC blamed
'Ken_i blamed himself_i.'

It should be noted here that some (e.g. Shibatani 1978) have proposed to use *zibun* as a test for grammatical subjecthood (of the nominal which is coreferential with it) in Japanese.

One apparent morphological difference between the English and Japanese reflexive forms is that *zibun* in Japanese has no marking for the gender and person of the referent (though plurality of the referent can be indicated by attaching *tati* to *zibun*) as seen in (2):

(2)	*zibun*	'my/your/him/her/itself'
	zibun-tati	'our/your/themselves'

2.1. The current approach

Previous works on *zibun* in Japanese and on its differences from the English reflexives, including the functional ones cited above, have based their conclusions mostly or exclusively on invented sentences. The current analysis takes a more corpus-based, data-driven approach, and examines the attested usages of *zibun* in written narrative discourse. Thus, the current analysis is expected to demonstrate what the actual distributional data say about the use of *zibun*, at the same time providing us with a tool for evaluation those previous analyses on *zibun* reflexivization in light of naturally occurring language data.

2.1.1. Data source

In this study, I examine the occurrences of *zibun* in 150 "Tensei Jingo" daily essays, the Editor's daily notes in the Asahi Shinbun, one of Japan's leading newspapers, and also, for the contrastive aspect of this study, the occurrences of the English reflexive forms *oneself/selves* in "Vox Populi, Vox Dei", the English translation of "Tensei Jingo" published in the English version of the newspaper, the Asahi Evening News.

The Tensei Jingo essay is relatively popular in Japan and often serves as the source for the texts used in Japanese language tests and language textbooks. Each essay is about 870 Japanese characters long, and its English translation is about 580 words long. The 150 essays examined (150 Japanese essays and 150 English translations) were published during the first six months (January to June) of the year 1990. Not all the daily essays are translated and carried in the English version of the paper, and this research examined all of and only those essays whose corresponding English versions were also published.

2.1.2. Results and a quick comparison

A search for all instances of reflexive forms was carried out in the 150 pairs of essays. The results are as follows: in the 150 essays examined, 53 occurrences of *zibun* were attested in Japanese and 83 occurrences of *oneself/-selves* were attested in English.

To get a rough idea of how the reflexive patternings differ in the two languages, let us here consider how the instances of *zibun* map onto those of the English reflexives. That is, if the number of correspondences between the two is 53 (i. e. all the occurrences of *zibun*), then it follows that the Japanese reflexives are used basically in the same contexts as those in English except that there are some additional contexts in which English reflexives appear. Such a situation can be illustrated with a Venn diagram, and may be represented as A in Figure 1 below. If there is no correspondence between the two, it means that the reflexive forms in the two languages are used in totally different contexts, as expressed as B. In a similar manner, the situation where the number of correspondences between the two is somewhere in between is shown in C:

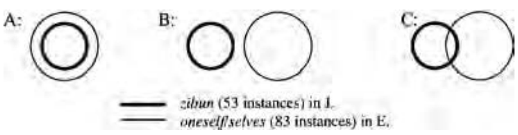


Figure 1. Situations for Japanese and English reflexives

An analysis of the data revealed that 16 out of the 53 instances of *zibun* were translated as the reflexive forms in English. The Venn diagram representation of the situation thus most closely corresponds to C in Figure 1 above, where the *zibun* forms in Japanese are used in some of the same contexts as the English reflexive forms, but where the reflexive patternings in the two languages differ from each other in most cases.

3. Cognitive theory of English reflexivization

Let us first briefly review, as a cognitive theory of reflexivization phenomena in English, van Hoek's (1995, 1997: Ch. 7) work in the Cognitive Grammar framework for our later comparison of the various ways that each of the two languages express reflexive notions.

She applies Langacker's (1991: 169) model of "reference points" to the anaphoric relationship between two coreferential nominals (i. e. an

antecedent and the (reflexive and non-reflexive) pronouns coreferential with it) and develops her theory of reflexivization within that model. (See van Hoek 1997: Ch. 3.) Reflexives in English can be characterized in terms of a schematic value and a prototypically organized inventory of constructional schemas. Schematically characterized, the profile of the reflexive must correspond with a reference point (i. e. an antecedent) which can be considered to be the most accessible in relation to the reflexive as determined by salience and conceptual connectedness. Accessibility here refers to the proximity between the two coreferential nominals, and "the most accessible" here can be paraphrased as "the closest by virtue of linear or conceptual adjacency".

Van Hoek takes a prototype approach and offers an analysis of reflexives in English in terms of a network of constructional schemas organized around two distinct, but closely related, prototypical meanings of the reflexive. Her analysis of the constructional schemas is summarized in (3) (the example sentences are all from her work cited above):

(3) Primary prototype (prototypical reflexive):
John cut himself./Mary saw herself.
near extensions: *Sally bought a car for herself.*
viewpoint extensions:
picture nouns: *Mary found a picture of herself.*
logophoric: *And that was exactly it, he thought. He really didn't care too much what happened to himself.* (Patricia Highsmith, The Glass Cell, 1973: 79)
SA participants: *Somebody like yourself might like this.*
Secondary prototype (emphatic reflexive):
John himself knows I'm right.
near extensions: *You can do that yourself.*

The two prototypes differ in that the primary prototype, or prototypical reflexive, has the antecedent and the reflexive coding arguments of the same verb, which define its conceptual connectedness, as shown schematically by the diagrammatic representation given in Figure 2. The primary prototype reflexive configuration includes the conception that the referent of the reflexive's antecedent views him/herself from within the onstage region. This situation is characterized by van Hoek as "semi-subjective perception." In the secondary prototype, or the emphatic reflexive, on the other hand, the linear adjacency of the reflexive to its antecedent

defines the conceptual connectedness. A number of extensions from these prototypes have become conventionalized in English. In the near extension of the primary prototype, for instance, the reflexive is not the primary landmark (direct object), but is rather the secondary landmark (thus, it has a lesser degree of conceptual connectedness).

A set of more distant extensions from the primary prototype are the viewpoint extensions. These viewpoint extensions also include the viewing relation, but unlike the prototype configuration, the antecedent nominal is not overtly present within the immediate scope of the reflexive's predication and the viewing relation is implicit. Thus, in the picture noun schema (Cantrall 1974; Kuno 1987) as in *a picture of oneself*, the viewer of the picture is assumed. This is what motivates the occurrence of the reflexive form.[1] The logophoric reflexive pattern is possible if the sentence is construed as representing the thought or perception of a character in a narrative (as in the "free indirect" style) (Banfield 1982; Kuno 1987; Zribi-Hertz 1989). In the SA (speech act) participant reflexive (the first- or second-person reflexive with no overt antecedent), the antecedent for the reflexive is the conception of the speaker or addressee as a participant in the conversation and as the viewer of the clause. The picture noun configuration is schematically represented in Figure 3, and the logophoric pattern, in Figure 4:

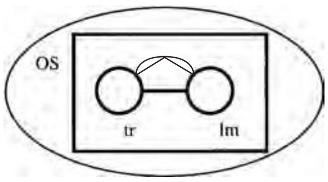


Figure 2. Prototype reflexives

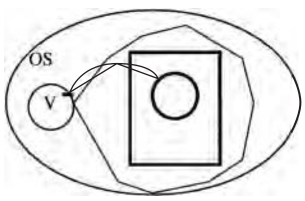


Figure 3. Picture noun reflexives

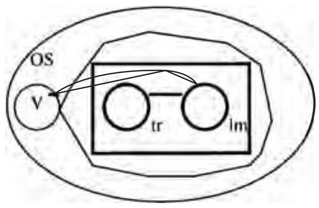


Figure 4. Logophoric reflexives

Van Hoek (1997: 173) notes that the prototypicality of these schemas can be partly determined by her informal counts of tokens from texts. My

natural written discourse data actually supports her analysis and shows that out of the 83 occurrences of reflexive forms attested, 44 are instantiations of her typical configuration where the reflexive is in the object position and its antecedent is the verbal subject (Included are one case where the verb is a phrasal verb *take care of*, and one case where the reflexive is in the indirect rather than direct object position of the verb *ask*). Twenty-four are instantiations of the secondary prototypical configuration of the emphatic reflexive type, and the remaining 15 do not fall into either category. This situation is shown in Table 1:

Table 1. Number of occurrences in constructional schemas

constructional schema type	token
the reflexive and its antecedent are co-arguments of a single verb (inc. *take care of* and *ask*)	44 (53%)
the emphatic reflexive type	24 (29%)
others (6 preceded by *by*, 4 by *for*, and 1 each by *from*, *on*, *besides*, *between*, and *(a picture) of*)	15 (18%)
total number of English reflexive forms in the data	83 (100%)

4. English and Japanese reflexives in contrast

Now, with this analysis of English reflexives in mind, let us examine the Japanese *zibun* reflexives and the Japanese counterpart expressions of English reflexives found in the data.

The first clear difference of *zibun* reflexivization from the English reflexives in terms of the constructional schema organization is that *zibun* does not take the emphatic configuration, which is frequently attested in the English reflexives. The Japanese counterparts of the English emphatic reflexives in our data use various other forms of emphatic function, such as *zisin* 'self's body' [2 instances], *zitai* 'self's body' [1], *honnin* 'the person in question' [1], *sonomono* 'the very thing' [1], *hontai* 'main body' [1], or other discourse markers of focus or contrast such as *koso* [1] as shown in (4):

(4) *zisin* 'self's body' [2 instances]
zitai 'self's body' [1]
honnin 'the person in question' [1]

sonomono	'the very thing' [1]
hontai	'main body' [1]
koso	emphatic particle [1]
etc.	

One exception to this non-use of *zibun* for the English emphatic reflexive is the use of a somewhat idiomatic expression of *zibun de* 'for/by oneself', a sequence of *zibun* + the instrumentative case marker *de*. Two instances of the English emphatic reflexives have this pattern in their Japanese counterparts, as shown in (5). In both cases, the antecedent is human.

(5) *…, zyosei no sensei ga zibun de kangeki-si* … (Mar. 8)
female teacher NOM be moved …
'a female teacher herself became moved and …'

It is not surprising for two substantially distinct semantic schemas of one form in a language, to be expressed with distinct forms in another language. This seems to be the case with the two prototypical schemas of English reflexives – the prototypical reflexive and the emphatic reflexive – and we can conclude that the emphatic reflexive configuration is not a sanctioning schema for *zibun* in Japanese.

Now, we know Japanese *zibun* reflexivization is different from English reflexives in that *zibun* is not used for the emphatic pattern of English reflexives at all. This does not mean, however, that *zibun* reflexives resemble the English reflexives in their prototypical reflexive function. I will discuss two major differences below.

First, as we noted previously, the most frequently attested configuration in English is the one where reflexives appear in the verbal object position. In the Japanese data, however, out of the 53 occurrences of *zibun*, only four occur with the verbal object function (i. e. are marked with the accusative marker *o*). Two of them are in an essay titled "Pictures Tell Stories" (Jan. 4), which is concerned with a psychologist who has been carrying out research on paintings by children. One of the two is shown in (6) below (note the so-called "pro-drop" nature of Japanese, where the antecedent of *zibun*, *kodomo* 'child', is topicalized and not structurally present anywhere in the sentence):

(6) *"Wasureta" to, kazoku-ga no naka ni zibun o*
forgot saying, family-picture GEN inside LOC ACC
egaka-nu koto mo aru. (Jan. 4)
draw-not cases there are

(lit. 'There are cases where (a child) does not draw self in the familiy picture, saying "(I) forgot."')
'There are cases where a child does not draw himself in a picture of his family, saying "I forgot."'

This means that the *zibun* reflexivization in Japanese infrequently occurs in the object position, which is the prototypical configuration in English and many other languages. In fact, this makes Japanese reflexivization rather unique cross-linguistically, since the prototype configuration for English represents the situation type which Kemmer (1993: 43) calls the "semantic prototype that forms the basis of the grammatical category of reflexive in human languages." (See also Faltz (1985: 3) for her "primary reflexive strategy".)

The other major difference between *zibun* and the English reflexive is that *zibun* can frequently occur by itself in the clausal subject role. This crucially differentiates Japanese *zibun* from the English reflexive in particular, since in English, no configuration is allowed where the reflexive form stands alone in the subject position: "Accordingly, reflexives are disallowed in many positions because their appearance would represent too great an extension from any conventionally established schema (e. g., reflexives in subject position, for which no sanctioning constructional schema has developed …)." (van Hoek 1997: 192; see also Deane 1992).

In the data, there were ten occurrences of *zibun* functioning in the subject role. Six occurrences of *zibun* were marked overtly with the nominative marker *ga*. In four other cases, there was an implicit marking of the nominative. These ten nominative usages reflect more than double the frequency of the attested object usages of *zibun* in the data. The sentences in (7) and (8) below are examples of this type from the data (square brackets are added to indicate clausal boundaries):

(7) *[Zibun ga nooryoku de ninmei-sareta noka, aribi*
NOM ability owing to got.appointed Q alibi
hurau na noka] to utagatta. (Apr. 15)
Frau be Q wondered
(lit. '(I) wondered [if self had been given the job because of the ability or as an "alibi Frau"].')
'I wondered if I had been given the job on my own merits or as an "alibi Frau".'[2]

(8) *[Zibun dake (ga) usiro muki de kao ga*
only (NOM) face backward and face NOM
mienai] no mo dooyoo da. (Jan. 4)
not.be.visible one also the same is
(lit. 'So are/The same can be said of those (= children's drawings) in which [only self is facing backward so that the face cannot be seen].')
'This is the same in the case of the child drawing only itself facing backward so that its face cannot be seen.'

The observable, common factor in all ten of these cases is that the *zibun* forms used in the subject position only occur in an embedded clause, whose main clause either has a verb of cognition or speech (seven cases) as in (7) or describes a situation of the picture noun type (three cases) as in (8).

5. Can Cognitive Grammar apply to Japanese *zibun*-reflexivization?

We have observed two major differences between Japanese *zibun* reflexivization and English reflexives; namely, Japanese *zibun* does not typically occur in the verbal object position, which is the prototypical configuration of reflexives in English and many other languages, and Japanese *zibun* frequently stands alone in the clausal subject position, where no English reflexives are allowed. With these two conspicuous differences in mind, can we expect van Hoek's theory of English reflexives to apply to an analysis of Japanese *zibun* reflexivization? My answer to this question is "Yes. We can."

My solution to this problem of cross-linguistic variation in the reflexivization phenomena is to propose a different, language-specific constructional schema organization for Japanese *zibun* reflexivization, leaving intact the basic components of the reference point model – prominence, semantic connectivity, and linear order. This kind of solution is actually already suggested by van Hoek, who notes: "[w]hile the schematic patterns in other languages should be motivated by the same principles of reference point organization used for English, the development of particular constructions is in part a matter of historical accident, and may therefore vary considerably…" (van Hoek 1997: 228–229).

Thus, taking the quote above to be implicit permission from the author of the theory herself to propose a different constructional schema

organization for a different language, let me propose the following very rough sketch of the constructional schema organization for *zibun* reflexivization in Japanese. What the data tells us is that the prototype reflexive schema in English is not the same as the prototype schema that sanctions Japanese *zibun* reflexivization. Instead viewpoint factors are frequently observable. Thus, I contend that Japanese *zibun* reflexivization has the viewpoint constructional schema as its prototype, while the other schemas are less prototypical (including the English reflexive prototype of coreference between co-arguments of a single verb). That is, the cognizer (including the speaker) who conceptualizes an entity (an event or a thing) is the most salient reference point for *zibun*, and *zibun* represents the cognizer himself in relation to his cognized entity. The informal representation of the semantic structure would be very much like Figure 3 above, although in the case of *zibun* in Japanese the conceived entity (the square in the Figure) can not only be a conceived thing like a picture/drawing, but be a conceived event, of which *zibun* is a participant.

Let us consider what this implies in terms of the reference point model. Suppose I introduce myself to a person at a conference and she responds, "Oh, you are Prof. H.'s colleague!". By using my colleague's name, she is using Professor H. as a reference point to understand who I am, or to "locate" me in her conceptual space. For her to be able to do this, Prof. H. has to be salient in her consciousness (i. e., Prof. H. is world famous, or she knows him well since she has worked with him before) and she has to be aware of some conceptual connectedness between Prof. H. and myself (i. e., we both work at the same institution). However, if she is a student of some discipline other than linguistics, she might think of someone else and his relationship (possibly of a different kind, e. g., hostile) with me. Thus, who is salient and what is conceptually connected can vary with the experience of the speaker and/or the speech community they belong to. The difference between the English and Japanese reflexive constructional schema organizations suggests a similar variation between (the speakers of) the two languages: in English the subject is salient as the reference point and its conceptual connectedness with the object is close, while in Japanese the cognizer of an entity is salient and the conceptual connectedness between the cognizer and his cognized entity is very close.[3]

Although it is beyond the scope of this paper to lay out all the theoretical constructs and go into detail in accounting for Japanese reflexivization, let us examine two other language-specific properties of *zibun* to further illustrate and account for its differences from reflexives in English.

Van Hoek notes that the viewer in the viewpoint configuration is typically conceived of as animate, and she gives Cantrall's (1974: 147) examples such as those reproduced in (9), where viewpoint reflexive constructions involving an inanimate entity are anomalous:

(9) a. *The adults in the picture are facing away from us, with the children behind themselves/them.*
 b. *The house in the picture is facing away from us, with an elm tree behind *itself/it.*

This animacy constraint for the viewpoint reflexives seems to apply to Japanese *zibun* reflexivization as well, but in a more substantial way.

We have observed above that *zibun* does not typically occur in the prototype reflexive configuration prominent in English and many other languages, where the reflexive and its antecedent are co-arguments of a single verb. This rather unique characteristic of *zibun* reflexivization in Japanese, can be accounted for to a large extent by a language-specific constraint that the profile of the referent of *zibun* cannot be any part or whole of the antecedent's physical body (Jacobsen 1988; Hirose and Kaga 1997).

Thus, the Japanese counterparts of the relevant cases in English follow one, or a combination, of the following three patterns to circumvent the use of *zibun* in the object position: i) use of body part terms for the object (e. g. 'shave (one's) face' rather than 'shave oneself'); ii) promotion of other participant nouns or event nouns (see "verbal noun constructions" in Uehara 1998 b) to the object position (e. g. 'have a shave'); and iii) elimination of the need for the verbal object altogether by using intransitive rather than transitive verbs (e. g. 'shave' rather than 'shave oneself'). The examples in (10), (11) and (12) are taken from the data and illustrate the patterns i), ii) and iii), respectively:

(10) a. *zibun no mi o mamoru sikanai* (Apr. 24)
 GEN body ACC protect must
 '(We) must protect ourselves.'
 (lit. '(We) must protect our (own) body.')

 b. *te o tuite heihukusuru kooho ga iru* (May 16)
 hand ACC attaching bow candidates NOM exist
 'There are candidates who prostrate themselves.'
 (lit. 'There are candidates who bow with their hands on the ground.')

(11) *hitobito ga rensyuu o siteiru* (Apr. 14)
poeple NOM practice ACC be doing
'People are training themselves.'
(lit. 'People are having practice.')

(12) *mata tuyoku naru* (Feb. 27)
again strong become
'(He) will make himself strong again.' (lit. '(He) will become strong again.')

Additional examples of these constructions found in the data are listed in Table 2:

Table 2. Reflexives in English and their non-reflexive counterparts in Japanese

reflexive expression in E.	counterpart in J. & lit. translation	pattern(s)
clothe oneself	*mi ni matou* 'put on one's body'	i + ii
clothe oneself	*mi ni yorou* 'arm one's body'	i + ii
accustom oneself	*mi ni tuku* 'get attached to one's body'	i + iii
revitalize oneself	*seiki o kaihuku suru* 'regain one's vigor'	ii
arm oneself	*busoo suru* 'get armed'	ii + iii
burn oneself out	*moetukiru* 'become burned out'	iii
bury oneself	*umoreru* 'become buried'	iii
call oneself …	… *to nanoru* 'give one's name as …'	iii
confine oneself	*tozikomoru* 'remain cooked up'	iii
enjoy oneself	*asobu* 'play/have fun'	iii
place oneself in one's shoes	*mi ni naru* 'become someone's body'	iii
rouse oneself to action	*tatiagaru* 'stand up'	iii
shut oneself up at home	*tozikomoru* 'keep at home'	iii
throw oneself	*tobioriru* 'jump down'	iii
transform oneself	*naru* 'become'	iii

The contrast here clearly shows the so-called "become" language nature of Japanese as opposed to a "do" language like English (Ikegami 1981), and suggests that the transitive predicate structure itself is not as basic in Japanese as it is in English, lending support to the point made above about the conceptual connectedness between subject and object in Japanese. In fact, the contrastive patterns between the two languages account for 33 cases of the 35 English reflexives in the object position whose Japanese counterparts do not have *zibun* in the data, and this animacy constraint on *zibun* intertwined with the "become" language nature of Japanese provides a reasonable explanation for the non-prototype status in Japanese of the configuration where the reflexive and its antecedent

code the co-arguments of a single verb. Van Hoek (1997: 173) notes that the configuration exemplified in (13 a) is determined as the most typical use of the reflexive marker in English partly "by examples of usage elicited from native speakers":

(13) a. *John cut himself.*
b. *???Zyon wa zibun o kitta.*
John TOP ACC cut

In contrast, the sentence in (13 b), which is a literal Japanese translation of (13 a), is not elicited from native speakers and even sounds infelicitous in Japanese; the configuration where the profile of the referent of *zibun* is part of the antecedent's physical body, represents too remote an extension from the prototypical viewpoint schema in Japanese.[4]

Unlike the reflexive forms in English, forms other than *zibun* exist in Japanese for referring to the antecedent's physical (i. e., non-animate/non-sentient) aspect as in (10)–(13) above, and also for the emphatic function (for which animacy plays no role) as in (4). The data here seem to support Hirose and Kaga's (1997: 89) description of the referent of *zibun* as being like the spitting image, or alter ego, of the cognizer. We can thus posit this kind of specification in the profile of the prototypical (viewpoint) *zibun* in Japanese.

The discussion of a difference in the form-function distribution between Japanese and English brings us to another, morphological difference between the reflexive forms in the two languages; that is, there is no person or gender marking for *zibun* in Japanese, as we saw in (2). What this implies in light of the reference point model is that there is no difference in the referential distance in relation to the speaker, at least in the structural markedness pattern, whether the speaker is describing his own cognized event or he is describing somebody else's cognized event. This is illustrated by the examples in (7) and (8), and in both cases the same form *zibun* is used. This is in sharp contrast to the reflexive forms in English, which always mark the distinction in the referential distance from the speaker, using the forms like *myself* as opposed to *himself*. In the logophoric case in (3), for instance, the speaker/narrator, although taking the perspective of *he*, still detaches *he* from herself to some extent by obligatorily expressing the non-first person status and the otherwise-unnecessary-to-express gender status of the referent. Thus, when a person other than the speaker is construed as the reference point for *zibun* in Japanese, the pattern represents a typical situation where they function as the "surrogate speaker" (Langacker 1991: 253) for the event conceived.

The above discussion implies that in the *zibun* reflexive pattern in Japanese, the speaker has a more subjective perception of the cognizer (the reference point for *zibun*) and his or her cognized event, than in the reflexive pattern in English. I should add here that this characterization of Japanese leaning toward the subjective side receives strong support from recent discourse studies on Japanese (Iwasaki 1993; Uehara 1998 a and forthcoming), which demonstrate that the relationship between the speaker's perspective and subject in Japanese is more direct than other languages like English.

6. Concluding remarks

Although this is a preliminary study, I hope that this analysis of *zibun* reflexivization in written Japanese narrative discourse has successfully shown that, while *zibun* reflexivization differs decidedly from reflexivization in English, the conceptual reference point model can apply to both while accounting for the cross-linguistic variation in question, highlighting the differences between them.

Notes

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1. In the picture noun example in (3), the reflexive's antecedent *Mary* is the trajector (subject) of the overall predication, and is sufficiently salient as the reference point for the reflexive *herself*. An extension from this (and a still more distant extension from the primary prototype) is a construction such as *Tom showed Mary a picture of herself*, where the antecedent is the landmark (object), not the trajector, of the overall predication. The landmark is less salient as the reference point for the reflexive, and this schema may not be fully entrenched for all speakers (some prefer the non-reflexive form, i. e. *her*, over the reflexive form in the sentence).

2. "Alibi Frau" is a German expression ("woman of straw"), meaning one who is given a post in order to demonstrate that women are being promoted.
3. Subjecthood and cognizer-hood are in no sense in complimentary distribution, and the two seem to correspond to each other in most cases. Thus as we saw in (7), the antedent of *zibun*, the cognizer of the event, is at the same time the (implicit) subject of the main clause. However, there are cases where the two do not correspond. In the sentence in (8), for instance, the antecedent of *zibun*, the child as the assumed drawer of the picture in question, is not the subject in the usual sense of the term.
4. This means that *zibun* sentences such as the one in (1), although conveniently resembling the English typical reflexive configuration and often cited as illustrative examples of *zibun*, do not represent the typical instantiation in Japanese. The sentence in (1) is partially sanctioned only by virtue of the mental aspect (i. e. object of the verb *blame*) of the antecedent involved in the profile of the referent of *zibun*.

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Subjectivity and the use of Finnish emotive verbs

Mari Siiroinen

1. Introduction

This article deals with emotive verbs in Finnish and the factors that contribute to the choice of a particular kind of emotive verb. Verbs which differ in their profiling of experiencers and stimuli appear in constructions which reflect different construals of a situation (Croft 1990, 1991; Langacker 1991). I will show that the choice of the verb depends crucially on two factors: discourse topic and objectivity vs. subjectivity in speaker's construal of a scene.

The term *discourse topic* refers to the entity on which the speaker focuses attention and which is talked about in a series of clauses. Objectivity and subjectivity refer to the speaker's point of view. An utterance is called objective if it describes a situation where a speaker observes and reports events outside himself/herself. It is subjective if it describes a situation where the observer is him/herself a participant or strongly identifies with one of the participants, but is not him/herself profiled in the discourse. There are of course different degrees of objectivity/subjectivity. This is how Chun and Zubin (1995)[1] use these terms when dealing with some Korean verb constructions.[2] This usage of the terms *subjectivity* and *objectivity* is also compatible with that of Langacker (1985, 1990, 1999: 297–306).

2. Different construals of emotive situations

Emotive verbs, or verbs of emotion, belong to the larger category of mental verbs, which also includes verbs of cognition and verbs of perception. Mental verbs are interesting because mental phenomena can be construed in different ways in different languages, and one single language may also offer a number of alternative ways to construe them. (Langacker 1991: 303–304, Croft 1991: 212.)

For example, when using verbs to speak about emotions, the experiencer[3] is sometimes the subject[4], sometimes the object.

(1) a. *I like it.*
b. *It pleases me.*

Sentences (1 a) and (1 b) can be used to speak about roughly the same situation. However, the experiencer is subject in (1 a) but object in (1 b). There are many other verb pairs like this in English, see Table 1.

Table 1. English verbs of emotion[5]

Exp subj	Exp obj
fear	frighten
like	please
loath	disgust

This kind of alternation is found in many languages, including Finnish. Similar kind of Finnish verb pairs are shown in Table 2.

Table 2. Some Finnish verbs of emotion

Exp subj	Exp obj
pelkää[6] 'fear'	*pelotta* 'frighten'
inhoa 'loathe'	*inhotta* 'disgust'
hämmästy 'be surprised'	*hämmästyttä* 'surprise'
sure 'grieve'	*suretta*[7] 'make sb grieve'

The verbs in the left column have the experiencer as their subject and the verbs in the right column have the experiencer as their object. Example (2) shows how the verbs *pelkää* 'fear' and *pelotta* 'frighten' are used.

(2) a. *Hän pelkä-ä si-tä.*
(s)he fear-3SG it-PTV
subj obj
'(S)he is afraid of it.'

b. *Se pelotta-a hän-tä.*
It frighten-3SG (s)he-PTV
subj obj
'It frightens him/her.'

The basic word order in Finnish is SVO, so the nominative subject is before the finite verb and the object, which in this case is in the partitive case,[8] is after the verb in both sentences.

According to Croft there is a considerable amount of cross-linguistic variation in subject and object assignment for mental verbs. This variation can be found both cross-linguistically and within a single language (Croft 1991: 213–214). This is exemplified by the sentences in (1) and (2). Why does this variation occur? Croft explains it in the following way.

> There are two processes involved in possessing a mental state (and changing a mental state): the experiencer must direct his or her attention to the stimulus, and then the stimulus (or some property of it) causes the experiencer to be (or enter into) a certain mental state. Thus, a mental state is actually a two-way causal relation and is better represented as follows:
>
> experiencer stimulus
> direct attention to
> • ————————→ •
> cause mental state
> • ←———————— • (Croft 1991: 219.)

This bi-directionality of the mental state causal structure explains the variation of the subject/object assignment of mental verbs.

Neither the human participant nor the other participant, be it human or non-human, is thus clearly agentive in a mental state situation. Either can be construed as the active participant in the situation, which then becomes the subject (Croft 1990).

3. Verbs of emotion in use: which is selected

The preceding section provided an explanation for the existence of different kinds of mental verbs. Now I will discuss the factors that determine which participant is construed as the more central and more active one in an emotive situation. This, in turn, affects whether the subject-experiencer verb or the object-experiencer verb is selected. To this end, I studied the third-person usage of one Finnish verb pair, namely *pelkää* 'fear', with an experiencer subject, and *pelotta* 'frighten', with an experiencer object, in a corpus of Finnish texts, both fiction and non-fiction.

My premise is that the entity selected as the topic of discourse is presented as the most central and active participant in the situation de-

scribed. The term discourse topic is to be understood as defined by Givón: a topic is talked about during successive clauses in a discourse (Givón 1990: 902). The topic of discourse also affects the choice of the emotive verb: a verb with an experiencer subject will be chosen if the experiencer is the topic of discourse. In the case of Finnish: the verb *pelkää* 'fear' is selected when the experiencer is the topic of discourse.

Example (3) is taken from a novel. There are three persons in an art gallery: the narrator, a girl named *Kirsi* and the salesperson. Here, the verb *pelkää* 'fear' is a natural choice.

(3) a. ***Kirsi*** *ol-i* *mukana.*
Kirsi be-PST+3SG with
'Kirsi was there too.'

b. ***Se*** *o-li* *hyppi-nyt* *taulu-n* *luota* *toise-lle,*
she be-PST+3SG jump-PCP painting-GEN by another-ALL,
ol-lut *innoissaan.*
be-PCP excited
'She had been jumping from one painting to another, excited.'

c. *Koko* *aja-n* ***se*** *ol-i* *puhu-nut* *oma-a*
Whole time-GEN **she** be-PST+3SG speak-PCP own-PTV
kiel-tä-än, *jo-ssa* *ei* *ol-lut* *kaikk-i-a*
language-PTV-PX, which-INE NEG+3SG be-PCP all-PL-PTV
kirjaim-i-a.
letter-PL-PTV
'All the time she had been speaking her own language, which did not have all the letters.'

d. ***Myyjä*** *alko-i* *tuijotta-a.*
Salesman start-PST+3SG stare-INF
'The salesman started to stare.'

e. ***Se*** *ikäänkuin* *vetäyty-i* *taaksepäin,* *näytt-i*
he as+if move-PST+3SG back, look-PST+3SG
kauhistunee-lta.
terrified-ABL
'He seemed to move back a bit, looking terrified.'

f. ***Se*** ***pelkäs-i*** *ja* *inhos-i* ***Kirsi-ä.***
he **fear-PST+3SG** and loathe-PST+3SG **Kirsi-PTV**
'He was afraid of and disgusted with Kirsi.'

g. *Kuvittel-i kai saa-va-nsa tartunna-n.*
Think-PST+3SG probably get-PCP-PX infection-ACC
'Probably thought he would get an infection.'
(source: Hännikäinen)

At first *Kirsi* is the topic (sentences 3 a, 3 b and 3 c). In sentence (3 d), *myyjä* 'salesperson' becomes the topic and continues to be it in sentences (3 e) and (3 f). In sentence (3 f), the natural choice is the verb *pelkää* 'fear', a verb with an experiencer subject, as the referent of the experiencer has just been talked about.

In the opposite case, if the entity which is the stimulus in an emotive situation has been the topic of the discourse, a verb with stimulus subject would be selected. Of the verbs *pelkää* 'fear' and *pelotta* 'frighten', one would expect the latter to be selected. And this, in fact, turns out to be the case.

(4) is an example of the usage of the verb *pelotta* 'frighten'. The text is from a newspaper and it discusses the BSE (the "mad cow" disease).

(4) a. ***Suomalaise-t kuluttaja-t*** *o-vat huolissaan sii-tä,*
Finnish-PL consumer-PL be-3PL worried it-ELA
syö-vät-kö ***he*** *tietä-mä-ttä-än englantilais-ta naudanliha-a*
eat-3PL-Q **they** know-INF-ABE-PX English-PTV beef-PTV
'Finnish consumers are worried about whether they are unwittingly eating English beef'

b. *tai sii-tä peräisin ole-v-i-a ainesos-i-a kuten*
or it-ELA originated be-PCP-PL-PTV substance-PL-PTV like
liivatet-ta.
gelatine-PTV
'or substances derived from it such as gelatine.'

c. BSE-*tauti-in sairastu-ne-i-den nauto-j-en*
BSE-desease-ILL get+ill-PCP-PL-GEN cattle-PL-GEN
mahdollise-sta terveys-riski-stä *ihmis-i-lle ei*
potential-ELA health-risk-ELA human-PL-ALL NEG+3SG
edelleenkään ole täyt-tä varmuut-ta,
still be full-PTV certainty-PTV
'The potential health risk to humans of cattle stricken with the BSE disease is still not completely certain,'

d. *mutta varma-a on, että* ***mahdollinen terveys-riski***
but certain-PTV be+3SG that **potential health-risk**
pelotta-a kuluttaj-i-a.
frighten-3SG consumer-PL-PTV.
'but it is certain that the potential health risk frightens consumers.'
(source: Iltalehti)

The topics in sentences (4 a–d) are the Finnish consumers and the potential health risk to humans. In the sentence (4 a) *suomalaiset kuluttajat* 'the Finnish consumers' is the topic. In the sentence (4 c) the topic is *mahdollinen terveysriski* 'potential health risk'. In the sentence (4 d) the topic is still the potential health risk. In this case, again, it is natural to choose *pelotta* 'frighten', a verb with a stimulus subject, as the stimulus has been the topic of the previous sentence.

What is shared by the above uses of the verbs *pelkää* 'fear' and *pelotta* 'frighten' is that the point of view in both of them is that of an external observer, who is the narrator. The narrator observes the situation from the outside. The scene is thus construed objectively.

4. Subjectivity in verb usage

In addition to the above uses of the verbs *pelkää* 'fear' and *pelotta* 'frighten', the verb *pelotta* has a different kind of usage, of which (5) is an example.

(5) *Hän-tä pelotta-a (se).*
(s)he-PTV frighten-3SG it
obj subj[9]
'(S)he is frightened of it.'

The first characteristic of this use is that the word order is OVS, the experiencer object precedes the verb. The neutral word order of a prototypical Finnish transitive clause is, as pointed out above, SVO. As is well known, Finnish has a so-called free word order, but this is not absolute by any means. Other conventionalized word orders do occur. Word orders other than the neutral word order signal topicalization, contrastive

Sentence (6) is an example of this. It is part of a dialogue in a novel, and represents the speech of a fictional character.

(6) **Minu-a pelott-i** *ja minä tul-i-n*
I-PTV frighten-3SG+PST and I come-PST-1SG
tähäm *vähän juttele-ma-an.*
here little talk-INF-ILL
'I was afraid and I came here just to have a chat.'(source: Jotuni)

This tendency to use the verb *pelotta* in the OVS order, especially when the experiencer object is first person, is indicative of the inherent subjectivity of the OVS order of the verb *pelotta*. When the experiencer is first person, the speaker is not just an outside observer, but rather occupies a portion of the "onstage" area of the scene being described. This viewing arrangement, with the speaker herself onstage construes the situation highly objectively, but retains a degree of subjectivity in that the speaker has a dual role as both subject of conceptualization and as Object of conceptualization (Langacker 1999: 298).[10]

This type of expression is also used with a third-person experiencer. One typical context for this usage is in literary narrative; in particular, it is common with free indirect discourse.[11]

Example (7) has an example of this kind of usage of the verb *pelotta* 'frighten'. The text is an excerpt of a novel. The setting is the first Christmas of a young couple, *Lea* and *Eero*, who have agreed not to buy presents to each other.

(7) a. *Eero leppy-i-kin.*
Eero calm+down-PST+3SG-CLT
'Eero was appeased.'

b. *Hän hak-i huonee-sta-an paketi-n, jo-ta hän*
he fetch-PST+3SG room-ELA-PX package-ACC, which-PTV he
pitel-i käde-ssä-nsä.
hold-PST+3SG hand-INE-PX
'He fetched from his room a package that he held in his hand.'

c. *Ei-kö-hän ole vain joululahja sittenkin.*
NEG+3SG-Q-CLT be just Christmas-present after-all
'It is a Christmas present after all, isn't it?'

d. *Se ol-i neliskulmainen, pieni paketti ja valkea-ssa*
it be-PST+3SG rectangular, small package and white-INE
käärö-ssä.
wrapping-INE
'It was a rectangular, small package in a white wrapping.'

e. *Tuo on kuin kultasepä-n käärö, siisti. Mitä-hän*
That be+3SG like jeweller-GEN wrapping, neat. What-CLT
sii-nä on?
it-INE be+3SG
'That is like a jeweller's wrapping, neat. Wonder what there's in it?'

f. *Jos hän ol-isi osta-nut rannerenkaa-n tahi*
If he be-CND+3SG buy-PCP bangle-ACC or
sormukse-n, se-n kokoinen tuo paketti on.
ring-ACC, it-GEN size that package be+3SG
'If he had bought a bangle or a ring, that's what the size of the package was.'

g. *Mutta **Lea** ei ol-lut näke-vinään si tä.*
but **Lea** NEG+3SG be-PCP see-QUASI it-PTV
'But **Lea** pretended she didn't see it.'

h. *Nyt Eero ol-i pettä-nyt **hän-tä**, osta-nut*
now Eero be-PAST+3SG deceive-PCP **she-PTV,** buy-PCP
kuitenkin.
anyway
'Now Eero had deceived **her**, bought one anyway.'

i. ***Hän-tä pelott-i**, mi-llä **hän** se-n*
she-PTV frighten-PST+3SG what-ADE **she** it-ACC
maksa-isi takaisin.
pay-CND+3SG back
'**She was frightened** how **she** would pay it back.'

j. *Varmaan Eero ol-i mietti-nyt tuo-ta kauan ja*
Surely Eero be-PST+3SG think-PCP that-PTV long and
*kuitenkin päättä-nyt. Eero siis rakast-i **hän-tä**.*
still decide-PCP Eero thus love-PST+3SG **she-PTV**
'Surely Eero had given it a long thought, yet made up his mind. So Eero did love her.'
(Source: Jotuni)

Sentences (7 a) and (7 b) and (7 d) and (7 g) are the narrator's objective reporting of the situation. The sentences (7 c), (7 e), (7 f), and (7 h–j) are free indirect reporting of *Lea*'s thoughts. They are in present tense, and some of the sentences reflect questions in Lea's mind. In some cases, they express Lea's view point; in other cases Lea's and the narrator's view points are mixed. In the sentence (7 i), the verb *pelotta* 'frighten' is used with the OVS word order: *Häntä pelotti* 'She was frightened'.

Here, the view point is mixed between the narrator and *Lea*. The viewing arrangement is not optimal: the narrator is not objectively viewing the situation (*Lea*, *Eero* and other participants in the situation). Neither is the viewing arrangement egocentric, which would be the opposite of an optimal viewing arrangement: the situation is not totally subjectively construed. It is something in between: the narrator's and the experiencer's view points have merged. The situation is construed somewhat subjectively. This is a typical context for the OVS use of the verb *pelotta*.

This mixing of view points occurs when the narrator feels empathy with a third person, in this case the fictional character *Lea*. It also fits in nicely with the way Langacker (1999: 298) now defines subjectivity: the "subjective component is there all along, being immanent in the objective conception, and simply remains behind when latter fades away".

5. Crosslinguistic parallels

Chun and Zubin (1995) describe similar constructions with what they call perception and psychological verbs in Korean. They call a verb with an experiencer subject (like *pelkää)* an agentive verb and a verb with an experiencer non-subject (like the OVS use of *pelotta)* an experiential verb. According to Chun and Zubin, agentive verbs are used in contexts where there is an external observer objectively describing the psychological state of some experiencer. Their experiencer is in the nominative. Experiential verbs are used in contexts where the observer identifies with the experiencer. Their experiencer is in the dative. (Chun and Zubin 1995: 312).

Examples of this kind of Korean verbs are shown in Table 3.

As is well known, dative experiencers are not uncommon. They can be found in many languages: e. g. German, Icelandic, Polish, Russian, Malayalam, Hindi, etc.[12] The dative experiencer verbs in Korean and other languages resemble the OVS usage of Finnish verb *pelotta*. What is spe-

Table 3. Some Korean verbs of emotion

agentive	experiential	
musep-ta	musewe-ha-ta	'be afraid of'
mip-ta	miwe-ha-ta	'hate'
huhwe-toi-ta	huhwe-ha-ta	'regret'

(Chun and Zubin 1995: 312).

cial about Finnish is that the Finnish verbs do not have a "dative subject" (Finnish has no dative case, as such.), but the experiencer is formally the object of the verb. Finnish makes use here of its free word order: despite the fact that the experiencer is the object, it is placed in front of the verb. This makes it possible to use verbs like this in the same way as verbs with a dative subject.

When trying to express the special status of an experiencer who is not a typical agent (who would be represented as the subject) and not a typical patient (who would be represented as the object) but in between, languages try to find a way to code the experiencer in a way that is not subject-like or object-like but something in between. Some languages use the dative case and some, like Finnish, some other means.

6. Conclusion

In this paper, my primary concern has been the use of the Finnish verb pair *pelkää* and *pelotta*. Which of these verbs is chosen depends on the focus of attention and the point of view in the discourse. If the point of view is that of an outside observer, I call the context an objective context. The outside observer may focus his/her attention primarily on the experiencer or the stimulus, depending on the previous discourse. If the topic of the previous discourse is the experiencer, a sentence like (8 a) is chosen. If the topic of the discourse is the stimulus, a sentence like (8 b) is chosen. The outside observer's and the experiencer's points of view may be merged, as in (8 c). This kind of context I call a subjective context.

(8) a. *Hän pelkä-ä si-tä.*
(s)he fear-3SG it-PTV
subj obj
'(S)he is afraid of it.'

b. *Se pelotta-a hän-tä.*
It frighten-3SG (s)he-PTV
subj obj
'It frightens him/her.'

c. *Hän-tä pelotta-a (se).*
(s)he-PTV frighten-3SG it
obj subj
'(S)he is frightened of it.'

These three uses are available for a great many other pairs of verbs of emotion in Finnish, including the pairs *häpeä* ~ *hävettä* 'be ashamed', *sure* ~ *suretta* 'be sad', *inhoa* ~ *inhotta* 'loathe' etc.

From the point of view of linguistic choices, objectivity and subjectivity or point of view is thus of crucial importance when talking about people and the mental events that they experience.

Notes

The following abbrevations are used for glossing the morphemes in the examples. Nominal markings: ABE:abessive; ABL: accusative; ADE: adessive; ALL: allative; ELA: elative; GEN: genitive; ILL: illative; INE: inessive; PL: plural; PVT: partitive. Verbal markings: 3SG:3rd person singular; CND: conditional mood; INF: infinitive; NEG: negation verb; PCP: participle; PST: past tense; QUASI: quasi construction. Other markings: PX: possessive suffix; Q: question cliltic; CLT: other clitics. The data in this paper are taken from the following sources: Hännikäinen=Hännikäinen, Liisa 1997: *Onneksi* [Fortunately] (a novel); *Iltalehi* [Evening Paper] (a tabloid paper); Jotuni=Jotuni, Maria 1963 *Huojuva talo* [Swaying House] (a novel)

1. My thanks to Ilona Herlin, who drew my attention to Chun and Zubin's article.
2. Subjectivity and objectivity are also used by Langacker (1985, 1990) and Achard (1996, 1998) in somewhat different manner.
3. I find the semantic roles of experiencer and stimulus useful when talking about verbs of emotion. The experiencer refers simply to the participant that perceives, thinks, or feels something. The stimulus refers to the other participant, which is the stimulus or the object of the experience.
4. I use the terms subject and object in the sense they are usually used in the analysis of English. In most cases they are also useful concepts in describing Finnish syntax.
5. A complete list of these can be found in Levin (1993: 188–192).

6. The form of the verbs used is the vowel stem, not the infinitive.
7. What is typical of Finnish is a rich derivational morphology: a verb with a stimulus subject can be formed by causativising a verb with an experiencer subject, which is done by adding the causative suffix *ttA*. For more of this, see Siiroinen (1998).
8. About partitive case, see Helasvuo (1996).
9. If a verb has two arguments, subject is in nominative case and object is in accusative or in partitive case. Only a NP in nominative case makes the finite verb to agree with it.
10. Finnish has some other constructions which have a non-nominative NP before the verb in neutral contexts. Sentence (5) resembles these constructions.
11. For a discussion of free indirect discourse see e. g. Adamson (1996).
12. See van Belle and van Langendonck 1996, Zaenen, Maling, and Thráinsson 1985, Verma and Mohanan 1991, Barðdal 1999.

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From causatives to passives: A passage in some East and Southeast Asian languages

Foong-Ha Yap and Shoichi Iwasaki

1. Introduction

The causative-to-passive development has been observed in a number of languages, e.g. Korean (Keenan 1985: 262), Older Hungarian, Greenlandic Inuit, Turkic languages such as Tuvinian, Altai and Karakalpak, and Manchu-Tungusic languages such as Udehe (see Haspelmath 1990: 46–49). In this paper, we would like to discuss this phenomenon with examples involving the morpheme 'give', then extend the discussion to other related verbs of transfer with permissive causative meanings such as 'let'.

We begin by looking at some examples from Manchu-Tungusic and Chinese, then go on to examine some contextually-induced examples from Malay (an Austronesian language) and Akan (a Kwa language from West Africa). Based on these examples, we propose the following grammaticalization path as a possible source for passive 'give' constructions:

> lexical 'give' > permissive causative 'give' > reflexive 'give' > passive 'give'

We next address the related question of why passive 'give' constructions may not develop in certain other languages that possess causative 'give' constructions. In particular, we examine the lack of this causative-to-passive phenomenon in languages such as Thai, Khmer and Vietnamese.

Finally, we look at a number of passive constructions in Mandarin and Cantonese where 'let'-type morphemes also show the causative-to-passive development. We conclude with the claim that passives often emerge when causative verbs grammaticalize and become semantically extended, such that they can take non-agentive subject arguments, and this development is generally mediated via permissive and reflexive environments.

2. Causative-to-passive development in Manchu-Tungusic

It has been noted that in many Manchu-Tungusic languages the same morpheme *-bu*/*-(v)u,* derived from a verb meaning 'give', is used to express both causative and passive functions. We illustrate with examples from Manchu in (1) and (2) below.

(1) *i* *bata-be* *va-**bu**-ha*
he-NOM enemy-ACC kill-**CAUS**-PAST
'He made (somebody) kill the enemy.'
[I. Nedjalkov 1993: 194]

(2) *i* *(bata-de)* *va-**bu**-ha*
he-NOM (enemy-DAT) kill-**PASS**-PAST
'He is/was killed (by the enemy).'
[I. Nedjalkov 1993: 194]

The manipulative causative use of *-bu,* involving a volitional agent, is highlighted in (1), while the ordinary passive use signaled by *-bu*, in a context which underscores instead an affected patient, is shown in (2). This type of polysemous phenomenon for *-bu* has been observed by Gabelentz (1861: 516–529, cited in Haspelmath 1990: 48 and I. Nedjalkov 1993: 194), V. Nedjalkov (1964: 310; 1971: 165: 165–171, cited in I. Nedjalkov 1993: 193–194), Norman (1982: 245), Knott (1995), and more recently Li and Whaley (1999), among others. V. Nedjalkov has posited that the passive function emerged from the causative via reflexive-permissive contexts, and Knott has further argued with additional examples from other Manchu-Tungusic languages that this causative > reflexive > passive development is mediated via contexts involving "unwilling permission". This development is presented schematically in (3) below:

(3) Lexical 'give' > permissive causative > reflexive > passive

Knott observes that permissive constructions sometimes allow interpretations where "the subject has *less* control than the 'causee' … where the principle governing subject choice in active constructions is therefore violated" (1995: 56 fn 9). This then paves the way for the emergence of passive uses of causative morphemes.[1]

We represent this development schematically in (4 a–d) below. Note that bold fonts single out arguments with the higher agentivity value within the given construction.

(4)

a.	*permissive causative:*		
	CAUSER NP	CAUSEE NP	V-CAUS 'give'
	<**Agent NP**>	<Agent NP>	
b.	*unwilling permission:*		
	CAUSER NP	**CAUSEE NP**	V-unwilling PERM 'give'
	<Agent NP>	<**Agent NP**>	
c.	*reflexive permissive:*		
	CAUSER NP	**CAUSEE NP**	V-REFL PERM 'give'
	<Agent/Patient NP>	<**Agent NP**>	
d.	*reflexive passive:*		
	<Patient NP>	<**Agent NP**> (if expressed)	V-PASSIVE 'give'

3. Causative-to-passive development in Chinese

A similar phenomenon has also been observed for many Chinese languages. Indeed, Norman (1982) has noted that the use of the 'give' morpheme to express passive functions is a "pan-Chinese" phenomenon. Mandarin Chinese, for example, makes use of the 'give' morpheme *gěi* to express not only dative, benefactive and purposive functions, but both causative and passive functions as well, as illustrated in (5)–(13) below. The use of *gěi* to signal the manipulative causative is seen in (5), while its use to indicate the permissive causative emerges in the non-coercive context of (6).

(5) ***gěi*** *wǒ chī le yī jīng*
GIVE me have(<eat) ASP one shock
'(S/he) gave me a shock; (S/he) caused me to have a fright.'

(6) *wǒ* ***gěi*** *nǐ cāi ge míyǔ*
I GIVE you guess CL riddle
'I (will) let you gess a riddle.'
[Xu 1994: 368]

Examples (7) and (8) present two instances of the reflexive passive use of *gěi.*

(7) *Lǐsì* ***gěi*** *Zhāngsān kànjiàn-le*
Lisi GIVE Zhangsan see-ASP
lit. 'Lisi gave Zhangsan see (him).'
= 'Lisi was seen by Zhangsan.'
[Haspelmath 1990: 48]

(8) *tā* ***gěi*** *jíngchá zhūa zǒu le*
s/he GIVE police catch away ASP
'S/he was arrested by the police.'
[Zhu 1982: 181]

Mandarin passives may specify an overt "agent", which can be expressed either pronominally, as in (9) and (10), or through an overt nominal, as in (11).

(9) *wǒ* ***gěi*** *tā-men piàn le*
I GIVE them deceive ASP
'I was deceived by them.'

(10) *beī zi* ***gěi*** *tā dǎ pò le*
glass DIM GIVE s/he hit break ASP
'The little cup was broken by her/him.'
[Zhu 1982: 178]

(11) *fángzi* ***gěi*** *tǔfèi shaō le*
house GIVE hooligan burn ASP
'The house was burned down by the hooligans.'
[Zhu 1982: 179]

Finally, as illustrated in (12) and (13) *gěi* can also be used in agentless passive sentences.

(12) *fángzi* ***gěi*** *shaō le*
house GIVE burn ASP
'The house was burned down.'

(13) *yīfu quán* ***gěi*** *línshī le*
clothes all GIVE wet ASP
'The clothes got all wet (from the rain).'
[Zhu 1982: 178]

In a similar development, Cantonese also makes use of its 'give' morpheme *béi* to express causative and passive functions, as illustrated in (14)–(17) below. Example (14) typifies a permissive causative use of *béi.*

(14) *Ngóh* ***béi*** *léih yuhng gó ga chè*
I GIVE you use that CL car
'I'll let you use that car.'

Examples (15) and (16) illustrate the reflexive passive use of *béi.*

(15) *Ngóh*$_i$ *yauh* ***béi*** *yàhn ngàak-jó (ngóh*$_i$*) la*
I again GIVE people cheat-ASP me PRT
Lit. 'I again give people cheat (me).'
'I've been cheated again.'

(16) *Kéuih*$_i$ ***béi*** *yàhn gin-dóu (kéuih*$_i$*)*
s/he GIVE people see-RESUL her/him
Lit. 'S/he give people see (her/him).'
= 'S/he was seen by someone.'

As illustrated in (17), *béi* can also appear in a sentence with an inanimate subject, to yield a near prototypical passive.

(17) *Chín* ***béi*** *yàhn tàu-jó!*
money GIVE people steal-ASP
'The money is stolen!'

However, unlike Mandarin, an agentless passive in Cantonese cannot be realized by *béi.* Instead, a morpheme *beih* is used in agentless passive constructions, as illustrated in (18) below, but this appears to be the result of borrowing from another Mandarin passive marker *bèi* (Matthews and Yip 1994: 150), rather than the result of grammaticalization from the 'give' morpheme *béi* itself. In this sense, Cantonese *béi* has not grammaticalized as far as Mandarin *gěi.*

(18) *Júngguhng yáuh ngh go chaahkyàhn* ***beih bouh***
altogether have five CL thief PASS arrest
'Altogether five thieves were arrested'
[Matthews Yip 1994: 150]

Hokkien makes use of the 'give' morpheme *hoo*5 to express causative and passive functions as well, as illustrated in (19)–(23) below. The manipulative causative construction with *hoo*5 is exemplified in (19) and (20), while the permissive causative use is given in (21).

(19) *i1* ***hoo5*** *gua3 puah7-to3*
s/he GIVE me fall:down
'S/he made me fall down.'

(20) *i1* ***hoo5*** *gua3 ts'ua tsit7 e5*
s/he GIVE me have:fright one time
'S/he gave me a fright; S/he caused me to have a shock.'

(21) *i1* ***hoo5*** *gua3 khi4 khuã4 hi4*
s/he GIVE me go see movie
Lit. 'S/he let me go watch the movie.'
'S/he let me go to the movies.'

Hokkien *hoo5* can also be used to signal reflexive passives, as seen in (22).

(22) *i1* ***hoo5*** *gua3 khuã4 tioh7 (i1) la*
s/he GIVE me see ASP (her/him) ASP
Lit. 'S/he give me see (her/him).'
= 'S/he was seen by me.'

In addition, *hoo5* can also signal ordinary passives, as shown in (23).

(23) *lui* ***hoo5*** *lang2 thau1 la*
money GIVE people steal ASP
'The money is stolen!'

Xu (1994: 368) has posited that causative 'give' emerges from lexical 'give' via semantic extension, whereby the use of 'give' as a transfer verb is extended to contexts meaning 'give somebody the chance to do something'. We note that such permissive causative uses can be further extended into manipulative contexts in languages such as Mandarin and Hokkien, as illustrated in (5), (19) and (20) above,[2] though not Cantonese, which prefers to use the morpheme *jíng* ('make') in manipulative contexts.

Xu (1994: 366) further posits that passive 'give' emerges from lexical 'give' via a causative link. Among her arguments, Xu notes that early

uses of *gěi* ('give') in 18th century Chinese texts often show a causative nuance, while more clear-cut passive interpretations appear later in texts from the 19th century onward.

In a recent paper (Yap and Iwasaki 1998 b), we argued that the causative-to-passive development in Chinese is also mediated by (permissive) reflexive contexts, similar in some ways to the pattern observed in Manchu-Tungusic languages. A similar pathway has also been claimed for the development of passive 'give' in the Chaozhou dialects – illustrated, for example, through the uses of the morpheme *k'eh* ('give') in the Jieyang area (Matthews, Xu and Yip, under review).

4. Context-induced causative-to-passive development in Malay

Malay is another language that has multiple uses for one of its 'give' morphemes, *bagi*. In addition to dative, benefactive, purposive, stance marking, topic marking, and temporal marking functions, among others, the morpheme *bagi* in Malay dialects spoken in the northwestern regions of West Malaysia (e. g. Kedah and Perak) can also be used to express causative and sometimes passive meaning. We illustrate with a permissive causative example in (24) and a passive example in (25) below:

(24) *Ayah* ***bagi*** *kita pergi pancing ikan dengan Pak Man*
father GIVE us go catch fish with Pak Man
'Father let us go (rod) fishing with Pak Man.'

(25) *Duit kita habis* ***bagi*** *orang curi*
money our finish GIVE someone steal
'Our money completely give/let someone steal.'

Passive uses of *bagi*, such as that illustrated by (25), are quite restricted in Malay, with speakers showing individual variation. Part of the reason is dialectal, with speakers from the southern region of peninsular Malaysia resisting the use of passive *bagi.* Another reason appears to be sociocultural, with the more educated younger generation preferring to use the more standard and more pervasive *di-* passive rather than the more colloquial *bagi* passive.

Nevertheless, it is important that we consider whether there is a link between causative and passive uses of *bagi.* The Malay examples from

(26)−(31) below (reproduced from Yap and Iwasaki 1998 b) allow us to consider the robustness of the causative-to-passive development observed earlier with respect to various Manchu-Tungusic and Chinese languages.

In (26), we see *bagi* used as a verb of transfer meaning 'give', and it involves three arguments: an agent (the giver), a goal (the recipient), and a theme or patient (in this case, some money).

(26) *Ayah* ***bagi*** *orang (i)tu*[3] *sepuluh ringgit*
father GIVE person that ten dollar
'Father gave that person ten dollars.'

This gives us the following schema:

lexical 'give'
< agent$_i$ > < recipient$_j$ > < theme$_k$ or patient$_k$ >

The permissive causative use of *bagi*, seen above in (24), is substantiated again by example (27).

(27) *Ayah* ***bagi*** *orang itu pinjam cangkul kita*
father GIVE person that borrow hoe we
'Father let that person borrow our hoe.'

In (27), the verb *bagi* takes a sentential complement (or small clause) as object. Since the subject in the complement clause − namely, *orang itu* − is coreferential with the goal in the matrix clause, we obtain a 'compressed' construction where the recipient of the main clause also serves as the agent of the complement clause. In this type of compressed or complex predication, a causative construction emerges, whereby the subject of the matrix clause gets highlighted as a causer agent, while the recipient is highlighted as a causee agent. Not surprisingly, in many languages the causee agent receives dative marking, indicating a close relationship with recipienthood.

The more complex schema for a permissive causative interpretation of *bagi* is presented below:

permissive 'give' **complement verb**
< causer agent$_i$ > < recipient$_j$/causee agent$_j$ > < theme$_k$ or patient$_k$ >

Examples (28) and (29) below involve the use of *bagi* in reflexive contexts.

(28) *Ayah*$_i$ ***bagi*** *orang (i)tu ikut (dia*$_i$*)*
father GIVE person that follow him
'Father let that person follow him.'

In (28), we have a reflexive permissive construction, where the theme or patient in the complement clause is coreferential with a volitional agent subject in the matrix clause. In terms of referent identification, the construction is semantically reflexive, and the theme or patient in the complement clause can often be elided or omitted. Due to the reflexive interpretation of the construction, the subject in the matrix clause acquires not only an agentive meaning associated with 'the one who permits' but it also acquires a patient role as 'the one who is affected by the action carried out by the causee'.

The schema for a reflexive permissive construction involving a volitional agent subject is presented below:

reflexive permissive 'give' **complement verb**
< causer agent$_i$/patient$_i$ > < recipient$_j$/causee agent$_j$ > < theme$_i$ or patient$_i$ >

(29) *Ayah*$_i$ ***bagi*** *orang (i)tu tipu (dia*$_i$*).*
father GIVE person that cheat him
'Father was cheated by that person.'

In (29), we have a reflexive passive construction, so called because 'unwilling permission' is involved, in the sense that there is a lack of volition or willingness on the part of the subject in the matrix clause, even though the subject could be held ultimately responsible for the negative or adversative consequence. In this adversative reflexive construction, the subject has *less* control (if any) compared to the recipient or causee agent. In such a situation, the matrix subject is construed more as an affected patient, and a passive interpretation emerges.

The schema for a reflexive passive construction involving a non-volitional and affected patient subject is presented below:

reflexive passive 'give' **complement verb**
< causer agent$_i$/patient$_i$ > < recipient$_j$/causee agent$_j$ > < theme$_i$ or patient$_i$ >

Semantically reflexive constructions such as (30) and (31) below provide facilitative or 'bridging' contexts between permissive and passive uses of *bagi*.

(30) *Ayah* ***bagi orang*** **(i)*tu*** *tipu*
father GIVE person that cheat
'Father lets that person cheat.' (permissive interpretation)
'Father was cheated by that person.'
(passive, with specific agent)

(31) *Ayah* ***bagi orang*** *tipu*
father GIVE people cheat
'Father lets people (= everyone) cheat.'
(permissive interpretation)
'Father was cheated (by someone).'
(passive, with non-specific agent)

In (30) and (31), we see that elision or omission of the theme or patient argument can still give rise to ambiguity between a permissive causative interpretation and a passive one. Depending on whether the matrix subject is construed as willing agent or unwilling patient, a causative or passive interpretation will emerge accordingly. We note, however, that construal of an affected patient in subject position could only develop as a result of the semantic generalization of the morpheme 'give', whereby the verb has gradually extended its syntactic and pragmatic environments to contexts where it can take arguments with experiencer and patient properties in subject position. We also posit that such semantic extensions evolve, at least in part, via reflexive contexts – a development not unlike those observed in the Manchu-Tungusic and Chinese languages.

A further example from Malay can be seen in (32) below.

(32) *Saya tak suka* ***bagi*** *orang paksa.*
I NEG like GIVE people force
'I don't like to let people force (me).'
(permissive-reflexive interp)
'I don't like to be forced.' (passive reading)

The ambiguity that is often evident in the Malay examples, even in negative or adversative contexts, suggests that passive interpretations are still highly context-dependent or context-induced in this particular language.[4] In other words, the causative-to-passive development in Malay is not as highly grammaticalized as in some of the Manchu-Tungusic and Chinese languages. Nevertheless, it is significant that even in languages such as

Malay where the causative-to-passive development is still at a very young, or incipient, or perhaps merely exploratory stage, we still see evidence that the reflexive environment plays a very important role.

5. Context-induced causative-to-passive development in Akan

Akan, a Kwa language of West Africa, also has multiple uses for its 'give' morpheme, *ma.* Among the grammatical functions are goal (or dative) marking, benefactive marking, purposive marking, perspective or stance marking, and causative marking (Lord, Yap and Iwasaki in press). What is interesting for our present discussion is evidence of what is potentially a passive interpretation for certain causative constructions. One such example that shows causative/passive ambiguity is reproduced as (33) below:

(33) *ɔ$_i$-ma polisfo no bɛ-kyee no$_i$*
he-GIVE police the FUT-catch him
'He willingly let the police catch him.' (reflexive-permissive)
'He unintentionally let the police catch him' (passive)
= 'He suffered himself to be caught by the police.'

In (33), the first interpretation of the sentence is based on a reflexive-permissive construal of *-ma*, whereas the second interpretation is based on its construal as a passive.

Examples of passive interpretations appear to be infrequent in Akan, apparently more so than in Malay, though further research is needed in this area. Nevertheless, the availability of these context-induced passive interpretations provides us with a glimpse of what may be preliminary stages of a causative-to-passive development. More importantly, traces of these causative constructions that yield passive interpretations attest to the naturalness (though not necessarily robustness) of the causative-to-passive development across areally and typologically different languages.

6. Why causative 'give' does not passivize in Thai, Khmer and Vietnamese

Although it is important to understand how passive 'give' constructions emerge from causative sources as evidenced in some languages, it is also

important to understand why this development is not seen in certain other languages, particularly in those languages that otherwise show a similar range of 'give' functions. We consider here languages such as Thai, Khmer and Vietnamese, using examples from Thai for in-depth analysis.

As illustrated in (34), (36) and (38) below, Thai, Khmer and Vietnamese also make use of a 'give' morpheme to express permissive causative functions. The 'give' morpheme is realized as *hây* in Thai, *ʔaoy* in Khmer, and *cho* in Vietnamese. To convey manipulative or coercive causative meaning, the 'give' morphemes in these languages usually need to be reinforced by other morphemes such as 'do'. Thus very often Thai makes use of *tham hây,* Khmer makes use of *twəə ʔaoy,* and Vietnamese makes use of *lam cho,* as illustrated in (35), (37) and (39) below. Crucial for our present discussion, however, is the absence of passive 'give' constructions in these languages.

<u>Thai</u>

Thai shows both a permissive causative construction, as in (34), and a manipulative causative construction built on the combination *tham* 'do' + *hây* 'give', exemplified in (35).

(34) *mɛ̂ɛ (ànúyâat) hây chán lían mǎa thîi baan*
mother (permit) GIVE me keep dog at home
'Mother let me keep a (pet) dog at home.'

(35) *kháw cà' tham hây phûuyíŋ tòk náam*
s/he FUT DO GIVE girl fall water
'S/he will make the girl fall into the water.'
[Vichit-Vadakan 1976: 463]

<u>Khmer</u>

Khmer causative constructions parallel those of Thai. Thus, (36) illustrates a permissive causative, whereas (37) presents us with a manipulative causative involving the sequence *twəə* 'do' + *ʔaoy* 'give'. (We modified the transcription systems used in the cited sources.)

(36) *kñom ʔaoy neək daəleŋ*
I GIVE you walk-play
'I'll let you go for a walk.'
[Newman 1996: 189]

(37) *kñom baan twəə ʔaoy koat phək sraa klah*
I PAST DO GIVE her drink liquor some
'I made her drink some wine.'
[Matisoff 1991: 430]

Vietnamese

In Vietnamese, permissive causative constructions, such as that given in (38), arise from the grammaticalization of the main verb *cho* 'give'. Manipulative causative constructions pair the verb *lam* 'do' with *cho*, as seen in (39).

(38) *Òng ẫy không cho tôi thôi*
HON he NEG GIVE me resign
'He wouldn't let me resign.'
[Matisoff 1991: 429]

(39) *Anh hay* ***lam cho*** *em khoc*
older.sibling usually DO GIVE younger:sibling cry
'He usually makes his younger sibling cry.' (or 'You always make me cry.')

Given that Thai, Khmer and Vietnamese make productive use of their 'give' morphemes in causative constructions, a question that comes to mind is why passive 'give' constructions fail to develop in these languages. In recent work (Yap & Iwasaki 1998 a, 1998 b), we have identified a semantic constraint on the use of *hây* in Thai that contributes to the absence of passive interpretations of 'give' in that particular language. More specifically, the causative morpheme *hây* strongly favors an agentive subject. This has the effect of restricting the reflexive-causative constructions almost exclusively to volitional contexts, as illustrated in (40) below. Such constraints tend to block the emergence of passive interpretations.

Thai

(40) *kháw$_i$ hây tamrùat càp tua kháw$_i$*
s/he GIVE police catch body (>self) her/his
'S/he allowed the police to catch her/him.'
(willingly, deliberately)
*'S/he let the police catch her/him.'
(unintentional reading not possible)
= *'S/he was caught by the police.'
(passive reading not possible)

Preference for an agentive and volitional subject is strong for the 'give' morphemes in Khmer and Vietnamese as well, and this strong semantic constraint appears to block the extension of causative 'give' morphemes into contexts that could induce a passive interpretation.

It is interesting to note, however, that even in languages such as Thai, where passive uses of 'give' are generally considered to be unacceptable, passive 'give' interpretations can arise in certain negative permissive contexts involving unwillingness on the part of the subject. We illustrate the construals of a negative reflexive permissive as an ordinary passive with the following example in (41) (courtesy of Ruetaivan Kessakul, personal communication, August 31, 1998).

<u>*Thai*</u>

(41) *chán mây yàak hây kháw duu-thùuk*
I NEG want GIVE her/him look.down
'I don't want to let her/him insult (me).'
(negative reflexive-permissive)
'I don't want to be insulted by her/him.'
(passive)

Recall that Knott (1995) had earlier posited that in Manchu-Tungusic languages, passive 'give' interpretations can easily emerge from causative 'give' constructions via contexts involving unwilling permission. It appears that in Thai the negative permissive context is likewise the interface for causative/passive ambiguity.

7. Crosslinguistic observations

Our data thus far reveal a consistent pattern for the causative-to-passive development with different languages exhibiting different degrees of grammaticalization, as depicted schematically in Table 1. For comparative purposes, we have added English to the list of languages below, using as causative example the following couplet from Clement Clarke Moore's Christmas poem entitled "A Visit from St. Nicholas": *A wink of his eye and a twist of his head, Soon gave me to know that I had nothing to dread* – where the expression *gave me to know* is used in the (permissive) causative sense of 'let' or 'cause me to know.'[5] Other examples include *He gave me to understand/believe … , I am given to understand/believe …* [6]

Note, however, that unlike the other languages discussed in this study, English appears to have a more restricted range of grammatical uses for its 'give' morpheme.[7]

Table 1. A comparison of languages with 'give' functions along the causative track

Languages:	lexical 'give' >	causative 'give' >	causative-reflexive 'give' >	passive 'give'
Classical Manchu	✓	✓	✓	✓
Evenki	✓	✓	✓	✓
Mandarin	✓	✓	✓	✓
Cantonese	✓	✓	✓	✓
Hokkien	✓	✓	✓	✓
Malay	✓	✓	✓	restricted use
Akan (Kwa)	✓	✓	?	restricted use
Thai	✓	✓	restricted use	very restricted
Khmer	✓	✓	?restricted use	unevidenced
Vietnamese	✓	✓	?restricted use	unevidenced
English	✓	restricted use	?restricted use (see endnote 5)	unevidenced

The above implicational hierarchy is a striking one, and it deserves better crosslinguistic examination on a much larger scale than we are able to provide here.

8. The causative-to-passive development in 'let'-type constructions

The causative-to-passive development is observed not only in 'give'-type constructions but in other semantically similar constructions as well. Below we illustrate this with some 'let'-type examples from Mandarin and Cantonese.

Mandarin has a permissive morpheme *ràng,* which means 'allow, permit, let'. The use of *ràng* as a permissive causative is illustrated in (42) and (43) below.

(42) *tā* ***ràng*** *wǒ gēn tā qù*
s/he ALLOW me follow her/him go
'S/he let me follow her/him.'

(43) *nǐ* ***ràng*** *wǒ zài xiǎng xiǎng*
you ALLOW me again think think
'Let me think it over.'
[Zhu 1982: 179]

The use of *ràng* has extended to manipulative causative contexts, as illustrated in (44).

(44) ***ràng*** *wǒ xià le yī tiào*
ALLOW me have:fright ASP one time
'(S/he) made me have a fright.'

Ràng can also be used to express a directive causative, as illustrated in (45).

(45) *zhǔxí* ***ràng*** *dàjiā ānjìng yī xia*
chairperson ALLOW everyone be:quiet one
'The chairman ordered everyone to be quiet for a moment.'
[Zhu 1982: 179]

In addition, *ràng* can also be used to signal ordinary passives, as exemplified in (46).

(46) *fángzi* ***ràng*** *shuǐ chōng zhǒu le*
house ALLOW water wash go ASP
'The house was washed away by the water.'

It is worth noting that *ràng* is also used in reflexive-causative contexts, as illustrated in (47) below. Given the availability of reflexive *ràng* constructions, it is not surprising that *ràng* has evolved into a highly productive passive morpheme.

(47) *wǒ* ***ràng*** *nǐ xià huài le*
I ALLOW you have:fright ruin ASP
'I let you give me a terrible fright.'
= 'I really got a fright from you.'

Cantonese also has a permissive morpheme, *yáu,* which is derived from a verb meaning 'allow, permit, let'. This morpheme has also extended to passive contexts, though not to manipulative causative contexts. Exam-

ples of its lexical, causative and passive uses are illustrated in (48)–(52) below.[8] The permissive verb usage of *yáu* is shown in (48).

(48) *Kéuih* ***yáu*** *ngóh jihgéi yàt go yàhn.*
s/he LET me self one CL person
'S/he let me be alone by myself.'

Permissive causative uses of *yáu* are exemplified in (49) and (50).

(49) *Papa mama* ***yáu*** *ngóh jùngyi dím jauh dím.*
father mother LET me like anyhow then anyhow
'My parents let me do as I please.'

(50) ***Yáu*** *dàk kéuihdeih siu là!*
LET okay them laugh PRT
'Let them laugh as they like.'
[Matthews & Yip 1994: 363]

It is worth noting here that when used as a verb and as a permissive causative morpheme, *yáu* has a high rising tone, but when used in the passive sense, it has instead a low falling tone, expressed as *yàuh,* indicatiang perhaps that tonal reduction has gone hand in hand with grammaticalization.[9] The use of *yàuh* to indicate ordinary passives is illustrated in (51) and (52).

(51) *Nì fung wuih-seun* ***yàuh*** *ngóh sé.*
this CL reply LET me write
'This reply was written by me.'
[Newman 1996: 76]

(52) *Fong-jòu* ***yàuh*** *A-Sam béi kéuih.*
room-charge LET A-Sam give her/him
'The money for the room was given to her/him by A-Sam.'
[Newman 1996: 76]

The permissive morpheme *yáu* can also be used in reflexive contexts, as illustrated in (53) below. Again we see evidence of a possible reflexive link for the causative-to-passive development.[10] It is worth noting that as a permissive morpheme in a reflexive context, *yáu* in example (53) still retains its rising tone.

(53) *Kéuih$_i$* ***yáu*** *ngóh waah/lauh (kéuih$_i$).*
s/he LET me criticize/scold her/him
'S/he let me criticize/scold her/him.'

While we have seen numerous examples where the reflexive context can help facilitate a causative-to-passive development, it is possible that mediation via reflexive constructions may not be a necessary condition – or at least, mediation via the reflexive may not need to be direct. For example, Mandarin has another causative morpheme, *jiào,* derived from a verb meaning 'call, holler, yell',[11] which has also extended into passive contexts, but which appears to be rather awkward in reflexive contexts that could give rise to passive interpretations. This would mean that any passive uses of *jiào* must have emerged via some other construction, or some other mechanism.

Let us first look at examples of causative uses of *jiào,* illustrated in (54)–(56), and also at the passive examples, illustrated in (57)–(59). Example (54) presents a directive causative use of *jiào,* while example (55) typifies a manipulative causative use.

(54) *tā* ***jiào*** *wǒ-mén huí jiā*
s/he CALL us return home
'He told us to go home.'

(55) *tā* ***jiào*** *xiǎo haí kū le*
s/he CALL little child cry ASP
'S/he made the little child cry.'

An example of a permissive causative use of *jiào* is seen in (56).

(56) *nǐ yě* ***jiaò*** *tā chū qù móliàn*
you also CALL her/him go out gain:experience
móliàn
gain:experience
'You, too, (should) let him go out to gain some experience.' [Zhu 1982: 178]

Passive uses of *jiào*, as illustrated in (57)–(59), often involve an overt "agent" nominal. In natural discourse, however, when the agent is already known to both speaker and hearer, it is often elided, thus easily giving rise to agentless passives.

(57) *tā* ***jiào*** *rēnjiā zhuā zhù le bǎbìng*
s/he CALL people catch ASP ASP
'S/he was exposed for her wrongdoings by others.'
[Zhu 1982: 178]

(58) *tā* ***jiào*** *péngyoǔ-men pīpíng le*
s/he CALL friends criticize ASP
'S/he was criticized by her/his friends.'

(59) *mòshuǐpíng* ***jiào*** *dǐdi dǎ-fān le*
ink:bottle CALL younger:brother hit-topple ASP
'The ink bottle was toppled over by Little Brother.'
[Lu 1996: 268]

Now let us take a close look at the type of reflexive constructions that are compatible with the morpheme *jiào.* The example in (60) below highlights the fact that *jiào* can be used in reflexive-causative constructions, where the subject is agentive and volitional, and the reflexive action is deliberate and intentional. The example in (61), on the other hand, highlights the fact that *jiào* is incompatible in contexts involving unwilling permission. As in the case of reflexive *hây* constructions in Thai, reflexive *jiào* constructions in Mandarin cannot have an unintentional reading, hence a passive interpretation will not arise.

(60) *$tā_i$ jiào pēngyoǔ-men kàn [kàn] $tā_i$*
s/he CALL friend-PL look (look) her/him
'S/he asked her friends to take a look at her/him.'
(intentional request)

(61) * *$tā_i$ jiào pēngyoǔ-men kànjian $tā_i$*
s/he CALL friend-PL look-look her/him
'S/he let her friends spot her/him.'
(unintended event; unwilling subject)
= 'S/he was spotted by her/his friends.'

How then would we account for the development of causative *jiaò* into passive *jiào*? Causative *jiào* could easily have extended into passive contexts via analogy with *gěi* ('give') and *ràng* ('let'). That is, since causative uses of *jiào* frequently overlap with causative uses of *gěi* and *ràng,* over time, speakers of Mandarin have extended the use of *jiào* to other

semantic contexts that are already compatible with the usages of the causative morphemes *gěi and ràng.*

This process of semantic extension, however, does not proceed blindly, nor randomly. On the contrary, we often see that the process of grammaticalization is sensitive to (and hence constrained by) the etymological root (or source meaning) of the developing morpheme. Hopper (1991: 22) refers to this constraint as *the principle of persistence,* and defines it thus: "When a form undergoes grammaticalization from a lexical to a grammatical function, so long as it is grammatically viable some traces of its original lexical meanings tend to adhere to it, and details of its lexical history may be reflected in constraints on its grammatical distribution."

In the case of *jiào*, we note that it is able to extend into numerous passive contexts, much like *gěi* and *ràng,* but unlike these morphemes, *jiào* cannot readily extend its reflexive-causative constructions into reflexive-passive contexts where subject agentivity and volitionality is low. In other words, for reflexive constructions, *jiào* restricts itself to contexts that are compatible with causative interpretations and resists those that could give rise to passive ones. This is illustrated in (62) below, which highlights the fact that *jiào* tends to disallow causative/passive ambiguity in reflexive contexts.

(62) *tā*$_i$ *jiào pēngyǒu-men pīpíng tā*$_i$
s/he CALL friend-PL criticize her/him
'S/he asked her friends to criticize her/him.' (intentional request)
≠ 'S/he let her friends criticize her/him.' (unwilling permission)

The example in (62) above provides an interesting clue to the reason why reflexive uses of *jiào* are constrained to causative contexts. Note that *jiào* still retains much of its original lexical meaning. That is, the use of *jiaò* in a request context is still construable as a 'calling' act, where X calls upon his or her friends to do something to himself or herself (or *for* himself or herself). This is to say that even in a seemingly negative context such as an act of criticism, *jiaò* still prefers a volitional subject, whereas *gěi* and *ràng* would allow for an affected patient subject interpretation.

Given that the semantics of *jiaò* constrains its usage in reflexive-passive constructions, we need to recognize that its causative-to-passive development has probably evolved *without* the direct mediation or facilitation of reflexive contexts. Instead, it may have acquired passive functions via analogy with other causative morphemes. Indeed, it is not implausible

that semantic extensions via analogy sometimes permit the skipping of an intermediate step, as highlighted in the schema below:

gěi: lexical > permissive > causative reflexive > passive reflexive > passive
ràng: lexical > permissive > causative reflexive > passive reflexive > passive
jiaò: lexical > permissive > causative-reflexive > **(not available)** > passive

Grammaticalization via analogy does not therefore nullify the general observation that 'give'-type and 'let'-type passive constructions frequently evolve from causative sources via the mediation of reflexive contexts.

9. Conclusion

In this paper we have examined 'give' constructions in a number of languages (mainly East and Southeast Asian) and have focused in particular on the development of causatives to passives. For these languages we found that the emergence of 'give' passives from 'give' causatives is closely tied to a weakening or loss in the agency condition, consistent with observations made earlier in Haspelmath (1990), and often in reflexive and unwilling permissive contexts, as posited in Knott (1995) for Manchu-Tungusic languages. The reflexive and unwilling permissive environments, in particular, often induce passive interpretations because their subjects are in some sense no longer canonical agents, by virtue of the fact that as reflexive subjects they are at the same time also the affected patient.

We also noted that passive 'give' functions are blocked in languages that strongly favor highly agentive and volitional subjects. These observations are highly consistent with crosslinguistic observations that passivization is essentially a strategy for *defocusing an agent* (e. g. Shibatani 1985).

In this paper we also identified a number of Chinese languages (namely, Mandarin and Cantonese) whose 'let' morphemes also show a strong causative-passive link. Further investigation is needed to see to what extent their grammaticalization patterns parallel those of 'give' morphemes. It would also be interesting to examine how robust the causative-to-passive development is for 'let' morphemes crosslinguistically. If there are differences in degrees of robustness when compared to 'give'

morphemes, we can investigate further issues of lexical generalizability and other semantic constraints.

One of the important contributions of this study is that it has identified differential degrees of grammaticalization for the causative-to-passive development, particularly with respect to periphrastic 'give' constructions in languages such as Chinese, Malay, Thai and Akan. What is significant is that the general path of grammaticalization is semantically consistent with observations made for the causative-to-passive development in languages such as Manchu-Tungusic which make use of morphological 'give' constructions. In this sense, we can conclude that semantic and functional extensions from causatives to passives is a natural and fairly robust phenomenon crosslinguistically, although a larger scale study is needed to address the question of whether this development is influenced to a great extent by areal and language contact factors.

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Notes

1. Vladimir Nedjalkov (personal communication, September 27, 2001) provides an interesting example from an isolate language, Nivkh (formerly Gilyak), where reflexive and causative morphology added to the root verb meaning 'give' yields a lexical verb meaning 'receive' (< 'to let someone give to self'):

   (i) *p'i-**mɤ**-gu-d'*
   REFL-**give**-CAUS-FINAL
   'receive'

(ii) *(if)* *n'ax* *karandas*
(s/he) 1SG pencil (<stone-age writing instrument)
*p'i-**mɤ**-gu-d'*
REFL-**give**-CAUS-FINAL
Lit. 's/he let me to give a present to her/himself'
'S/he **received** a present from me.'

Note that the above example is consistent with the transfer notion where 'receive' focuses on the goal or recipient as affected patient. The feature of 'affected patient as subject' is also shared by passive constructions.

2. As noted in Casad (1998: 144−147), Cora, a Uto-Aztecan language of Mexico, shows this very pattern of lexical extension with the verb *á'a* 'to give (liquid to drink)' coming to mean 'allow someone to do X'. Langacker (1977) has further clearly documented the close connection between passives and reflexives in the Uto-Aztecan language family. Data from these languages should easily allow us to posit a grammaticalization chain that parallels the one observed in the Asian languages discussed in this paper, namely:

lexical 'give' > (permissive) causative > reflexive > (medio-)passive

In fact, the following examples from Cora (courtesy of Gene Casad and Gary Palmer, personal communication, August 2001) provide clear evidence in support of the viability of a grammaticalization chain, or 'bridging contexts' (e. g. Evans & Wilkins 2000; Matthews, Xu & Yip, under review), for the emergence of middle voice or medio-passive 'give':

(i) lexical *n-aa-t-**á'a*** me-COMPL-PERF-**give** 'he gave it to me'
(ii) permissive *n-aa-t-**á'a*** me-COMPL-PERF-**give** 'he allowed me to V'

e. g. *a'achú* *pu* *n-aa-t-**á'a*** *kumu sei méetru*
quantity 3SG:Subj me-COMPL-PERF-**give** about one meter

nyaj *á* *hua-t^{y}é-e-cha-xi-n*
I:SUB there EXTENS-middle-stand-PAST-PTC
'He allowed me to come and stand about one meter from him.'

(iii) medio-passive *wa-tá-**ur-a'a*** COMPL-PERF-**REFL-give** 'he gave in to them' (Lit. 'he$_i$ gave self$_i$ to them')

Although medio-passives (or middle voices) are semantically and morphosyntactically distint from canonical passives, they tend to share overlapping features (e. g. underlying reflexivity of referent, low agentivity) that serve similar functions (e. g. agent defocusing and/or emphasis on patient affectedness; e. g. Shibatani 1985). The proximity of their functions and parallels in their grammaticalization pathways deserve further study.

3. *Itu* is preferred for the formal register, particularly when stress is intended, while *'tu* is often used in colloquial speech, especially rapid speech. Since the

agent in a passive construction is defocused rather than emphasized, phonologically reduced *'tu* is more compatible with the passive reading in (30), while a permissive interpretation can take the form of either *'tu* or *itu*.

4. Some linguists (e. g. Evans Matthews et al., under review) refer to these ambiguous cases as 'bridging contexts', since they permit semantic and morphosyntactic extensions that give rise to new links within a grammaticalization chain.
5. We thank Carol Lord for bringing this example to our attention.
6. We thank Steve Matthews for these additional examples. Matthews notes that these 'give' constructions are "a little archaic/formal but not restricted to poetry" (personal communication, September 20, 2001).
7. English appears to prefer a different set of strategies to form its 'give' constructions, e. g. idiomatization and phrasal verb constructions, with *give in* and *give way* as examples of causative-reflexive uses (see footnote 1 for crosslinguistic comparison).
8. Note that permissive 'let' in Cantonese involves high rising tone 2, written in the Yale system as *yáu.* Passive 'let', on the other hand, involves low falling tone 4, written in Yale as *yàuh,* with an additional *h.* This additional letter is used in the Yale system to mark the three low tone registers in Cantonese (i. e. tones 4, 5 and 6), distinguishing them from the high ones (e. g. Matthews & Yip 1994: 8).
9. These tonal alternations may indicate that tonal reduction is involved, as part and parcel of the process of grammaticalization. However, Stephen Matthews (personal communication, September 20, 2001) pointed out that such reduction phenomena are not attested elsewhere in Cantonese, hence a tonal reduction account, though plausible, tends to come across as being ad hoc. According to Matthews, the more frequent pattern in Cantonese involves alternations between low tones (especially low falling tone 4) and the high rising tone 2), with the latter generally seen as deriving from the former (see also Matthews & Yip 1994: 23 fn). In other words, the frequently attested tonal changes from low to high runs contrary to the direction we have suggested earlier for the *yáu/yàuh* alternation.
10. Richard Wong suggests another possibility: passive *yàuh* could perhaps be an extension of the 'spatial source *yàuh.* Stephen Matthews (personal communication September 22, 2001) expands on this possibility by providing the following 'bridging examples' (taken from Matthews & Yip 1994: 120−1):

    (i) 'from' in terms of source:
    Ngóh ***yàuh*** *nìdouh hàahng heui tòuhsyùgyún*
    I FROM here walk go library
    'I walked to the library from here.'

    (ii) 'from' in terms of time:
    yàuh *gàmyaht hòichí*
    FROM today begin
    'starting from today'

(iii) 'from' reinterpreted as 'by', indicating the "source of responsibility or sponsorship":
Sóyáuh faiyuhng ***yàuh*** *ngóh fuhjaak*
all expenses FROM me responsible
'I'm responsible for all the expenses.'

Nì go jitmuhk haih ***yàuh*** *Wíhng 'On gùngsì dahkyeuhk*
This CL programme is FROM Wing On company specially
bo-cheut
broadcast
'This programme is broadcast specially by the Wing On company.'

11. Hongyin Tao (personal communication, October 8, 1999) points out that there has been more than one Chinese character associated with causative meanings that have similar pronunciations. While the *jiào* morpheme under discussion is usually associated with the character 叫, there is another morpheme, written as 教, which also has permissive meaning. This character has several pronunciations, *jiaō, jiaó, and jiaò,* as well as a number of meanings, including 'to transfer', 'to teach', and 'to let'.

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